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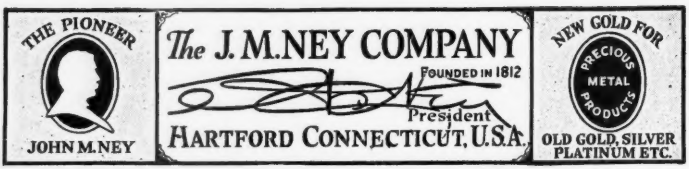


THE
DENTAL DIGEST

Vol. XXIX FEBRUARY, 1923 No. 2

Reciprocity and the Intelligence Test

By L. W. Dunham, D.D.S., New York, N. Y.

(Third Article)

There seems to be some misunderstanding on the part of critics regarding the claims made for Intelligence Tests, and in order to clear up some of these misconceptions, the questions brought up in the following letter to the Editor of the DENTAL DIGEST will form the basis for this installment.

Editor Dental Digest:

Reviewing Dr. L. W. Dunham's article, "Reciprocity—A Plan" in the December issue of the DENTAL DIGEST, I am led to wonder how an intelligence test can be an absolute gauge to a man's ability to serve the public, especially a basis for reciprocity. It is a matter of record that during the world war when psychological tests were brought into extensive use, it was repeatedly emphasized that a man's value in war service could not be judged by his intelligence alone, but that temperamental characteristics, initiative, tact, reliability, energy, ability to "carry on" under various conditions should be taken into account. Analogously a dentist's value to his profession and the public should be measured by other things that an intelligence test could not disclose, i.e., manual dexterity, honesty, training, and even culture.

Even granting that such examinations could be a fair basis upon which to establish reciprocity, they could not help but be ineffective for the purpose to which they were applied because, according to statistics compiled from tests of students in universities and colleges throughout the country, very few cases fell below the rating "C" (which is the lowest score one could make and still be eligible to be a dentist). These tests were given to students with the same training as that required of all dental students and often included dental students. It may readily be observed that graduates of dental colleges would be able to pass these examinations at any time if they were able to pass them once with a high grade (approximately 93% of college freshmen in a representative university made a score of A or B).

Moreover, the comparative scores of high school graduates and those not graduating from High School show a decided advantage

in favor of the former, although some remarkably creditable scores were made by non-graduates.

There can be no doubt as to the value of mental tests as a guide or auxiliary check on students to determine their mental capacity or mental ability when used in colleges and universities.

Very truly yours,

ROBERT H. GEHRING, D.D.S.

The author of "Reciprocity—A Plan" is not aware that he made any claims of infallibility for Intelligence Tests; nor has he so far suggested that intelligence covers "temperamental characteristics, initiative, tact, reliability, energy, ability to 'carry on,' etc.," nor has he hinted that an Intelligence Test would "disclose manual dexterity, honesty, training, and even culture," though he believes that a special form of Intelligence Test might easily give a considerable insight into many of those most desirable attributes.

However, he should like to have Dr. Gehring tell the readers of the DENTAL DIGEST to what extent the possession of a High School diploma proves the applicant to be "honest, cultured," of (presumably) professional "temperament"; to be possessed of "tact, initiative, reliability, energy and the ability to carry on." And he would remind Dr. Gehring that the Intelligence Test was offered *in lieu of a High School diploma*—nothing else! An examination in dentistry was expressly provided in the plan being discussed in order to determine the applicant's knowledge of and technical ability in his chosen profession.

But perhaps Dr. Gehring has in mind some other form of examination already in force which provides a means of determining a dentist's ability to serve the public; some plan that differs from the usual requirements for practice in the majority of the States, i.e., the possession of a High School diploma, graduation from a registered Dental College, letters of recommendation from two or more responsible individuals (usually dentists) vouching for the moral character of the applicant, the successful negotiation of a written and "practical" examination in dentistry, and the payment of an examination fee of $25.00 or more.

The contention of those in the profession who endorse interchange of dental licenses is that, once a person has satisfied the requirements for dental registration and been in reputable practice from three to five years, he or she should not be required to pass further examinations upon moving from one state to another. But inasmuch as there are many competent and intelligent dental practitioners who, for one reason or another, have never completed a High School course, and as many states insist on the possession of a High School diploma, the author has suggested an Intelligence Test to be used in those cases

where the applicant either has not completed a course in a secondary school or comes from a state where the educational standards are low, or, let us say, lower than those in the state he seeks to enter.

Heretofore, whenever the subject of "Universal Reciprocity" has come up, the question of the different educational standards in the States has been put forward and a hue and cry has been raised against the "influx of undesirable practitioners."

The author sees no objection to a system of regulation which has for its object the curtailment of the activities of incompetent practitioners, but he is strongly opposed to the present policy adopted by Dental Boards or governing bodies in many States which permits them to refuse to examine any dental applicant who does not hold a High School diploma, regardless of the number of years he may have spent as a useful, worthy member of his profession, while on the other hand, they will often admit to their examination a dentist who is no better, simply because he comes with a High School diploma.

To return to Dr. Gehring's criticism we note that he has unwittingly found himself in agreement with the writer, when he suggests that "graduates of dental colleges would be able to pass these examinations at any time *if they were able to pass them once*"—(the italics are ours); which is only another way of saying that a dentist who had never attended High School, but who successfully passed an Intelligence Test usually passed by High School graduates, would have given evidence of possessing a degree of intelligence equivalent to that possessed by the average High School graduate, and if that is true *why* should he not be admitted to the dental examinations just the same as a High School graduate?

Another point which our critic has apparently overlooked, however, is that Intelligence Tests vary according to the purpose for which they are compiled; and it would be manifestly inefficient to place an examination before a dentist of, say, 40 years of age, which might be well suited to test a nineteen year old boy who might be entering a college of liberal arts!

Let us not confuse the issue by reading into the claims of the advocates of Intelligence Tests statements which they would be the first to disclaim. A properly prepared intelligence examination will determine to a remarkable degree of accuracy, the student's intellectual capacity and mental fitness to engage in a given line of endeavor, but it will not measure many acquired traits, involving the emotions, for example, though, as suggested earlier in this article, many times an experienced examiner will be able to gain much information aside from the specific object of the test.

Reciprocity based on some equable, intelligent plan must and will come. The principal *visible* stumbling block is the difference in edu-

cational standards. The author's plan offers a way to place the question on a basis of intelligence plus the *special* knowledge necessary to the pursuit of dentistry as a profession.

It must be either that or National registration *without* any examination, unless we are to remain in the present chaotic state which has its only counterpart in the divorce laws.

Stabilizing the Maxilla

By Vethake E. Mitchell, D.D.S., New York, N. Y.

In fracture of the maxilla the problem of stabilization is more difficult than with the mandible; as the mandible is a movable structure it can not be used as a support for the maxilla; therefore it is necessary to get this support in some way from the top of the head.

The first appliance used for this purpose, I believe, was the Kingsley splint. This was constructed of vulcanite, covering the upper teeth, with heavy wire extensions protruding at the corners of the mouth, and bent backwards, conforming in shape to the cheeks, from which support could be had by ligating these extensions to a skull cap.

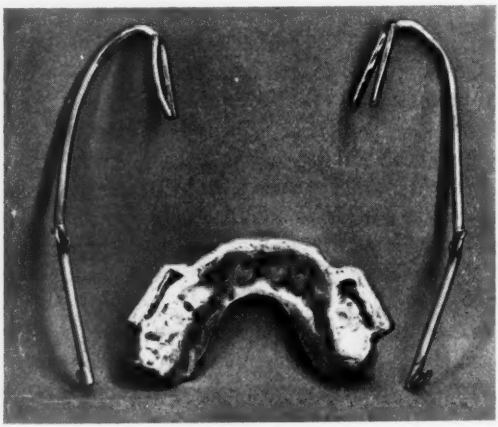


Fig. 1. Splint and Extension Arms.

These extensions were first made in one piece with the vulcanite splint, requiring a special flask for the purpose; later a square tube was vulcanized in the splint and a square wire that fitted the tube was used; this simplified the construction. Later yet, splints of metal were swaged and used in place of the vulcanite.

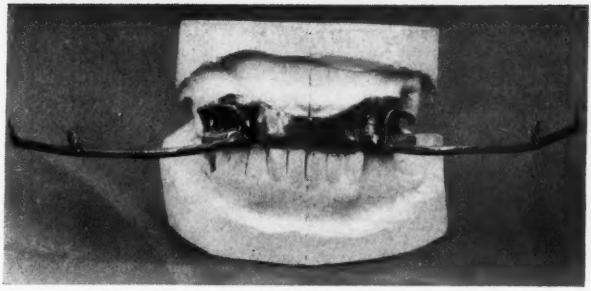


Fig. 2. Splint on Cast.

Since the advent of the casting process and the improved machines, the time and labor for the construction of splints have been materially lessened and more satisfactory appliances have been constructed. Gold, silver or aluminum can be used for this purpose.

As all splints are more or less temporary appliances, gold is seldom considered necessary. Coin silver made to 26 gauge has just the proper rigidity, and in cementing to the teeth, the cement will adhere to the silver better than to any other material.

The appliance illustrated, shows the splint and tubes cast in one piece, 26-gauge coin silver.

The extension arms are 12-gauge German silver round wire, and fit the tubes snugly. A finger extension is soldered to each arm to rest

Fig. 3. Splint in position and attached to Head Gear.

Fig. 4. Lip raised to show Splint and Occlusion of Teeth.

against the buccal flange of the splint to prevent it turning in the tube.

To the extension arms are soldered two small rings, for the purpose of making attachment to the head-gear. The head-gear is made of a strip of crude guttapercha, one and one-quarter inch wide, and one-eighth inch thick, in the ends of which shoe eyelets are fastened so that it can be laced together.

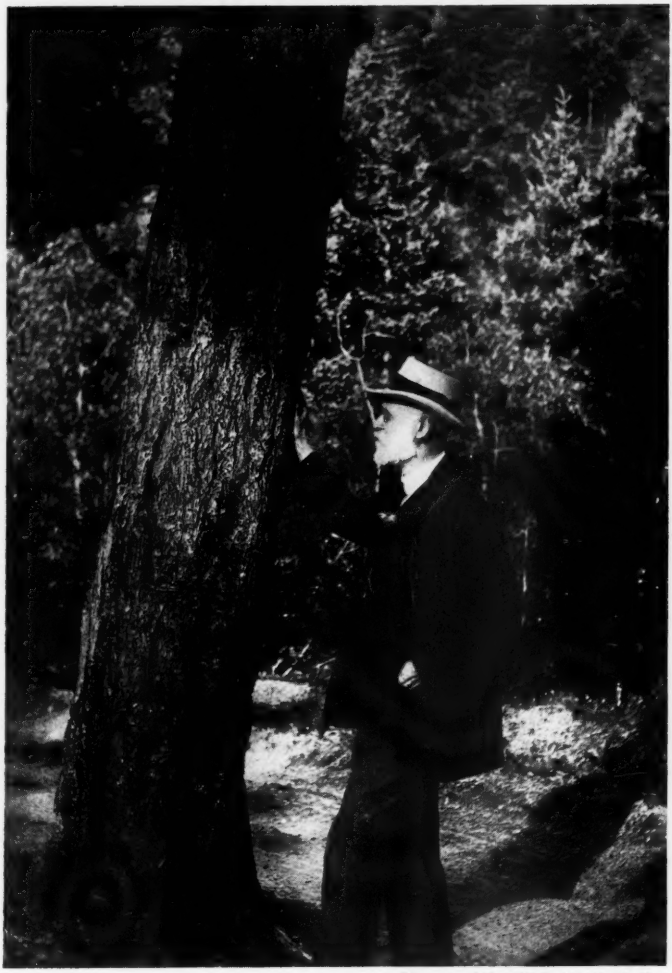
The guttapercha will conform to the head, and when lined with canton flannel is quite comfortable to wear.

Three eyelets are also fastened to the band on each side of the head so that the protruding arms of the splint can be laced to the head-gear.

One word of caution: In lacing the splint to the head-gear, only sufficient force should be used to bring the fractured parts together. If more pressure is used resorption of the fractured ends will take place, and an abnormal position of the maxilla will result.

No new principle is claimed for this appliance, merely the simplicity of its construction.

17 East 38th Street.



Photograph by Frederick S. McKay

GREENE VARDEMAN BLACK, M.D., D.D.S., Sc.D.

Photo taken in Colorado on the occasion of Dr. Black's visit there to study mottled enamel.

Dentists desiring a print for framing may have it by sending ten cents (in stamps) to this office to pay for packing and postage.

A Community Dental Clinic

By R. B. Stone, D.D.S., Los Angeles, Cal.

To most of us who inhabit this wonderful world (of ours) there comes a time when we close our eyes and dream of a world to come when everything on this earth will be ideal. We dream of a millennium. I doubt if there is a single person who has not at one time or another dreamed such a dream. In making this statement I am reminded of a passage I once read, where the author expressed himself as saying, "You cannot be a success unless you have an Ideal. If you haven't got one, get one, and hold onto it unto death."

Eight years have elapsed since that fateful day in August, 1914, when the news was flashed around the world that war had been declared, and the whole world vibrated from the concussion of this terrible calamity. In reviewing the last eight years it is possible to see that although this calamity has cost the world millions of human lives and hundreds of millions in wealth, it has brought to us a consciousness that could not have been brought to us in any other manner than through the suffering of such a worldwide calamity.

A New World Idealism

Even though we see all around us strife, war, pestilence, struggle between nations, capital and labor, the underlying consciousness is toward an Ideal State. This has been brought about by the suffering that was inflicted upon friend and foe alike in this worldwide calamity. Friend and foe have come to realize that this strife and struggle must cease; the intelligent person can already see clearly in the offing a ray of sunshine and the pathway leading toward this Ideal State, idealism and the dental profession at large. To the average dentist, dentistry means a living. He practises his profession not from choice, but from necessity. Until this condition is changed there will not be that contentment of mind and body that must necessarily come from finding pleasure in one's vocation. Again, on the other hand, we see that our patients do not come to us from choice, but from necessity. They would rather avoid us than come to us. In view of this fact it can already be seen that something must be done to bring about a condition whereby both these opposing forces must be brought together on a harmonious basis whereby each will give and receive what each is most in need of. To the dentist must be given the proper ideals, environment, remuneration, scope of practice, leisure time to study, relaxation, etc. To the patient must be given the best *service* at *cost* plus a certain percentage for overhead, etc.

Community Dental Service

The dental profession at large is undergoing a change that will probably take some time to evolve, but the final outcome will be Community Dental Service. The small one-man office is fast disappearing and in its place will come the group office and Community Dental Service. Just as the large chain stores have displaced the small storekeepers, so the large group offices will displace the small one-chair dental office. Here and there we will still have a small one-man business and dental office, but the large scale group office is the office of the future.

What This Means for Dentistry and the Public

First of all *service at cost. Why at cost?* Because the health of the public demands it. The health of the community is of first importance to the State, and as every one of us is directly affected by it, it should be of vital interest and importance to all of us to look to our fellow citizens' and neighbors' welfare as a matter of service and protection.

Our Duty to the Community

Every citizen has a right to demand from his community protection in the form of Fire, Police, Health, Water, Sanitation, etc. He also has the right to demand Life, Liberty and the Pursuit of Happiness. The world war has shown us that co-operation is the only solution to this problem. If a citizen has a right to demand these things from his community, he also assumes in return a duty. That duty is toward his community. What is the dentist's duty toward his community? *Service!* In what way? In a book published by Julius Rosenwald of Chicago, a survey was made by M. M. Davis, Jr., in which he states that there were about 44,000 dentists in the United States in 1920. The rate of dentists to the population varies about 1/1000 to 1/2400. He says, "It is obviously impossible for the present number of dentists to give a thorough program of care for adults whose teeth have been neglected during childhood. Dental caries (tooth decay) is the most prevalent of all human diseases, being found in a progressing stage in the mouths of at least 95 per cent of our school children. Ninety per cent of our school children do not use a toothbrush daily, and many of these are not financially able to obtain necessary professional treatment. It is obvious that at least two and a half times as many dentists as are now in the country would be necessary to give a complete service. The primary aim in a community dental program must be the children, and particularly the young children of today. To put a mouth that has been neglected for years into good condition is

as a rule an expensive process, requiring an outlay which a good proportion of the population cannot meet at the rates charged by dentists who give adequate service. The experience of a number of dental infirmaries shows that a dental clinic for adults can be made self-supporting. A complete dental program for adults is not practical, both because of its expense and because of lack of sufficient dental personnel. Public or semi-public dental clinics must also be largely depended on to deal with the adult dental problem, but these clinics for adults can and should be largely self-supporting."

Practical Results of This Survey

After a careful perusal of this survey an idea was evolved which resulted in the establishment in the City of Los Angeles of The Community Dental and Surgical Clinic. It will be epochal for Los Angeles and Southern California, and I hope it is the forerunner of many more to come throughout the United States. In the establishment of this clinic the main object will be the giving of better dental service to the community, by enlisting the entire dental profession of the community.

The Growth of an Idea

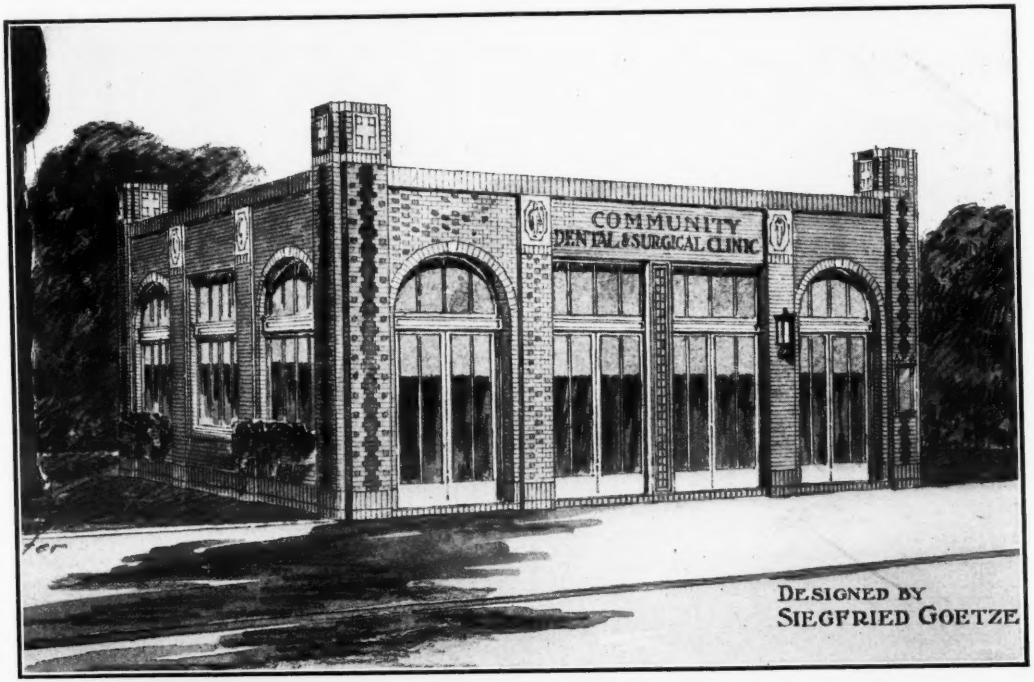
After evolving this idea it occurred to the writer that as this was to be a Community Clinic it must be naturally sponsored, endorsed and built by the community. Starting from this premise the support of influential business men was solicited, who made it possible for me to get in touch with public spirited and progressive members of the material and building crafts industries.

A Long Period of Pioneering

This required the interviewing of a great many people over a period of several months, who, when broached along the subject, gave it every encouragement possible, even going so far as to co-operate in the building of the clinic. It was gratifying to see the co-operative spirit exhibited by everybody during the construction of the clinic building. Los Angeles is building its New Central Library out of public funds, and the same spirit made it possible to establish the Community Dental and Surgical Clinic.

How Our Plan Works

We are building a one-story brick structure, 28 x 30, on one of the best streets in the city in close proximity to the business center. It is a structure expressive of its purpose, artistic in design and of practical interior arrangement in every sense of the word. It is built for efficiency and can be turned into an auditorium for lecture purposes by removing the curtains which partition the room.



Proposed Building for Los Angeles Community Dental Clinic.

Our Method of Operation

The operation of the clinic will be as follows: The clinic will be open from 9 A. M. to 4 P. M. daily. Prophylaxis 5 hours; X-ray 6 hours; Exodontia and Oral Surgery 5 hours; Dental Education (evenings) 2 hours; Eye, Ear, Nose and Throat 4 hours; Optometry 4 hours; Children's Diseases 4 hours. No reparative work will be done.

Our charge for this service is one dollar, depending upon the services rendered.

Upon completion of this service we generally refer each patient to that particular dentist in whose locality said patient resides, thereby throwing the responsibility upon said dentist to do his bit for the community. We generally give the patient the names of three dentists in that location so as not to make any certain dentist assume all the responsibility. In the working out of this plan we are starting from the following premise: As stated before in this letter every dentist has a right to demand from his community protection in the form of Police, Fire, Health, Water, Sanitation, etc. If he demands this right he also assumes a duty—a civic duty. We also proceed along the premise that if we doctors are willing to give part of our professional time to the building of a better humanity by way of our service it follows that that particular dentist to whom we refer said patient for reparative work can surely devote at least two hours a week to the service of the general public and the welfare of the community from which he is deriving his living. That is his duty toward the community, and we hope that very few dentists will refuse to give this service. The majority of dentists who will co-operate with us in this movement will gain the confidence of these patients in a way which will create a feeling of good will and prestige, which in turn will redound to the earning power of every dentist connected with this movement. So you see it is just a matter of good will on the part of everyone to do his part for Humanity, which simply amounts to this: *The law of compensation is immutable. Whatsoever ye soweth that shall ye also reap.*

The Possibilities of This Program

In a previous paragraph it was stated that there are approximately 44,000 dentists throughout the United States, and if each one of them would devote only two hours per week to humanity, it would mean 88,000 hours per week, which means 572,000 eight-hour days per year to the service of humanity. Allowing one hour for each amalgam filling, at a cost of approximately ten cents for each filling, would mean the saving of 4,576,000 teeth per year. It is an astounding problem, but I think it *can* be done if we only say we *will*. It is reasonable to believe that every dentist wastes at least one hour per day

in the practise of his profession, so if he would donate only twenty minutes of his day to the service of humanity he will be gaining something by doing this little act for humanity. If a co-operative feeling could be brought about in this way it would before long eliminate the quack dentist who is preying on humanity in giving inferior services for a small fee. It would elevate dentistry and create a demand for better work. This movement also would help to eliminate professional jealousy and would tend to spread the gospel of Good Will, Fraternalism and the Golden Rule, and in time would put the Dental Profession of the United States in the vanguard with this slogan: *Better Health via Better Dentistry via Community Dental Service.*

God Speed the Day.

Orthodontic Engineering*

By Lionel Hartley, D.D.S., New York City

Having pointed out the advantages and uses of Engineering methods in Orthodontia, we will now proceed to indicate step by step, the entire process of surveying the dentures both horizontally and vertically, designing and constructing the arches, of determining the compensating curve in a vertical survey, how to show the amount of movement necessary to put the denture in occlusion and designing special appliances to accomplish this end.

The first requirement is a set of good models made from good plaster impressions, and preferably made of white artificial stone and suitably trimmed. Having these, we are now ready to *level* the models

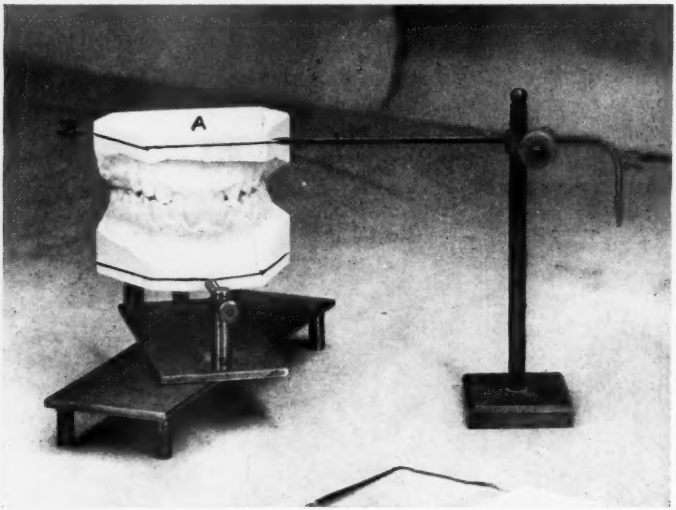


Fig. 5.

and fix them in the levelling table. Three points are selected on the upper model, which are assumed to be in a horizontal plane, as follows:

1. The incisal edge line at its intersection with the median line.
2. One point on either side of the denture, usually the mesio-lingual cusp of the 1st permanent molar.

Where the levels of these latter points are evidently different, other points are selected which are on approximately the same level with

Figures 1 to 4, mentioned in this article, were printed in previous issue.

each other and with point No. 1. The upper model is placed on the levelling T (Fig. 4-a), resting on the three points above described.

A line (Fig. 4-b) is described around the base of the model with a surface gauge (Fig. 4-c). The upper model (Fig. 3-b) is fastened in the levelling table, with its three screws on this line, teeth uppermost.

The *registration* device (Fig. 3-a) is now placed in position and the lower model (Fig. 5-a) articulated with the upper (as indicated by full crush bite) teeth down and a level line (b) described around the base with the surface gauge (c).

The upper and lower models are held in close contact with one hand and the registration device is made to mark extreme right and left points on each model, having the same horizontal projection. A piece of carbon paper slipped under the points aids materially.

The lower model and the registration device are now removed, leaving the upper in position in the levelling table. The levelling table

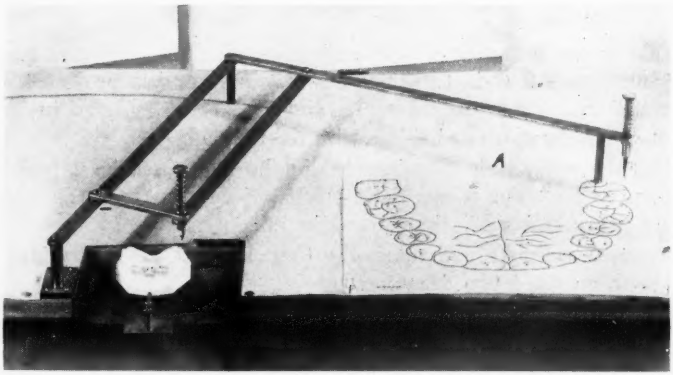


Fig. 6.

with the model in position is now slipped into the horizontal grooves (Fig. 1-f) in the table. The model is now centered by means of the large set screw (Fig. 1-g) so that the enlarged projection is well within the bounds of the drawing paper (Fig. 6-a) on the table. We next survey the model (Fig. 7) and the following points are now projected on a piece of tracing paper 12½ x 13 inches:

(a) Gum lines (or gingival circumference of each tooth).
(b) Sulci and grooves.
(c) Rugae.
(d) Cusps and ridges.
(e) Median line (suture).
(f) Registration points.

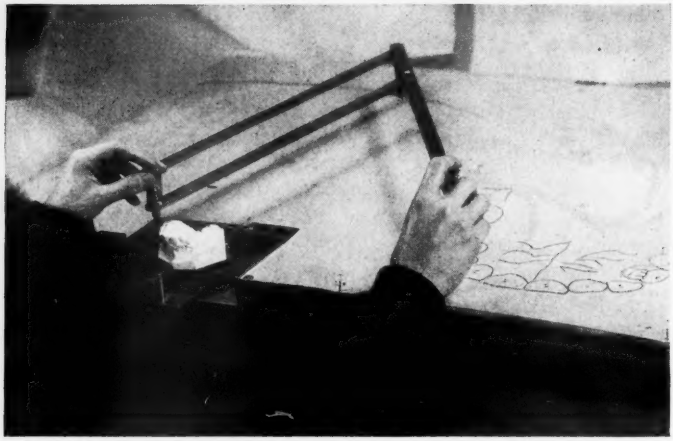


Fig. 7.

Taking one group at a time and connecting the projected points with ink lines—that is to say, all the gum lines are projected and connected with black ink, the sulci and grooves also drawn in black ink, and then the cusps and ridges with red ink and so on.

The lower model is now inserted in the table in a level position, teeth up, and similar points of interest projected on another sheet of tracing paper and similarly marked in ink.

We next estimate and mark the Centers of Area (centroids) of each tooth on these two drawings.

For the sake of uniformity, the following colors are selected to depict the points of interest of the eight drawings used in surveying, arch designing and appliance designing:

No. 1 *Upper* and No. 2 *Lower*—Original projections (Figs. 8 and 9).

Gum lines, Sulci and grooves and Rugae drawn in black India ink.

Cusps and Ridges drawn in vermilion ink. Cusps marked by a dot in small circle.

Mark R and L on all drawings, also two projection registration points, X in ¼-inch circles.

No. 3. *Malocclusion* (Fig. 10).

Gum lines.

Cusp patterns.

Centers, upper X in circle numbered odd, lower X in circle numbered even (⅛-inch circles).

Upper in black India ink; lower in vermilion ink; cusp patterns in pencil; vectors in pencil.

No. 1 Upper

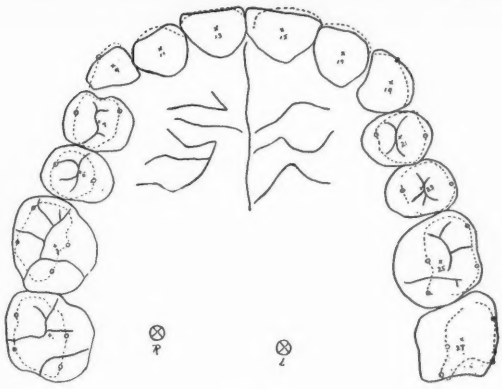


Fig. 8.

No. 2 Lower

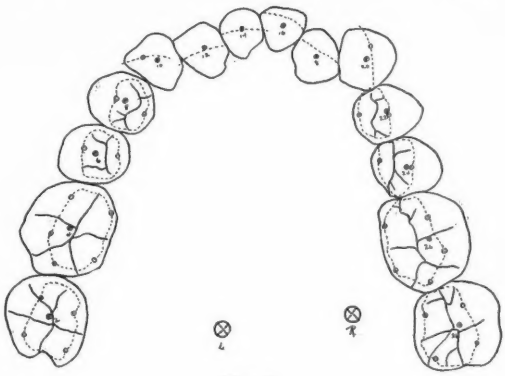


Fig. 9.

No. 4. *Occlusion* (Fig. 11). Same points and colors as in Malocclusion drawing. Vectors in black India ink.

No. 5. *Upper Diagnosis* (Fig. 12). *Malocclusion.* Black India ink.

No. 6. *Lower Diagnosis* (Fig. 13). *Occlusion.* Green ink.

No. 7. *Upper Treatment* (Fig. 14). Malocclusion only, in black India ink.

No. 8. *Lower Treatment* (Fig. 15). Appliances in Yellow ink.

Draw contact Mesio-distal diameters in pencil (ends dotted in ink) on all drawings, except No. 7 and No. 8. These mesio-distal diameters are obtained in the following way:

No. 3 Malocclusion

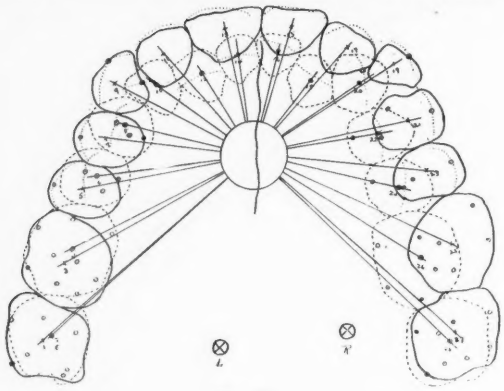


Fig. 10.

No. 4 Occlusion

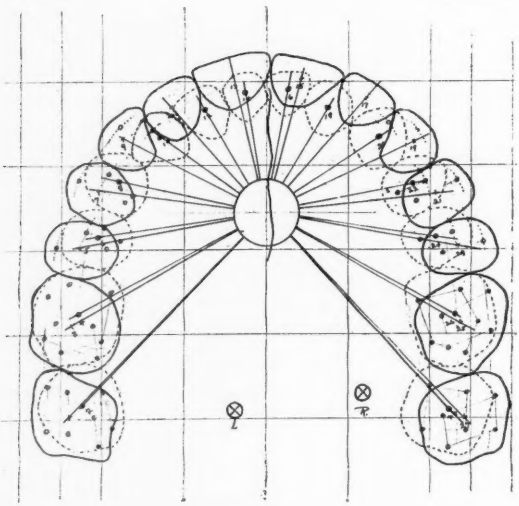


Fig. 11.

Molars. 1 mm. lingual to the buccal cusps and parallel to them—use extreme cusps on lower (Fig. 16-c).

Bicuspids. 1 mm. lingual to the buccal cusps and parallel to the buccal margin (Fig. 16-d).

Cuspids. 1 mm. lingual to cusps and parallel to the margin.

Incisors. 1 mm. lingual and parallel to the incisal edges. This 1 mm. means actual size in the mouth, hence for use in drawings which are enlarged 5 diameters. These measurements are 5 mm. *magnitude.*

No. 5 Upper Diagnosis

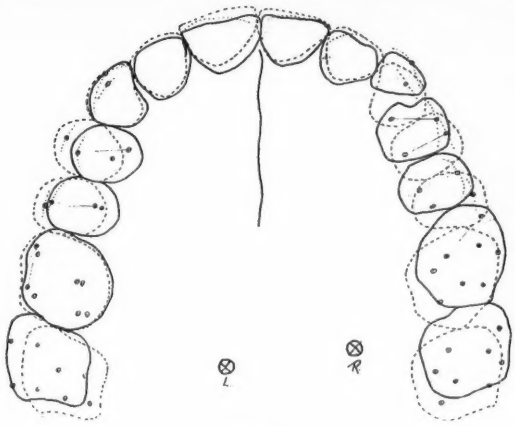


Fig. 12.

No. 6 Lower Diagnosis

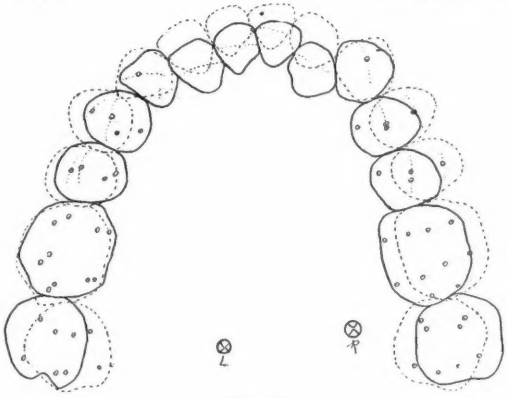


Fig. 13.

In measuring mesio-distal diameters, we assume the molars as on a straight line and the remaining teeth on a circle of 3 centimeters radius. The following, therefore, is the procedure of determining the magnitude of the mesio-distal diameters of the teeth:

Molars. Draw the two tangents (Fig. 15-a and b) to the gum lines which are perpendicular to the line of direction. The magnitude is the distance between the feet of these perpendiculars.

Bicuspids and all the rest of the teeth. Use a pair of dividers (Fig. 17-a) of 15 cm. length (on a 5 to 1 scale drawing), keeping

No. 7 Upper Treatment

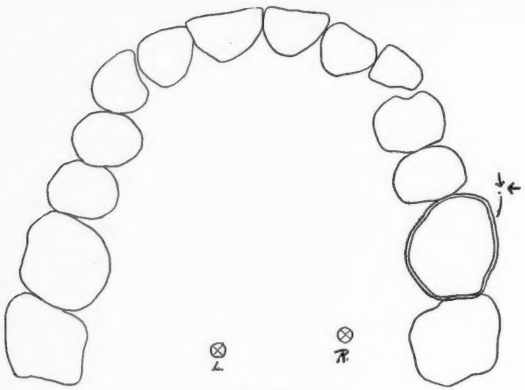


Fig. 14.

No. 8 Lower Treatment

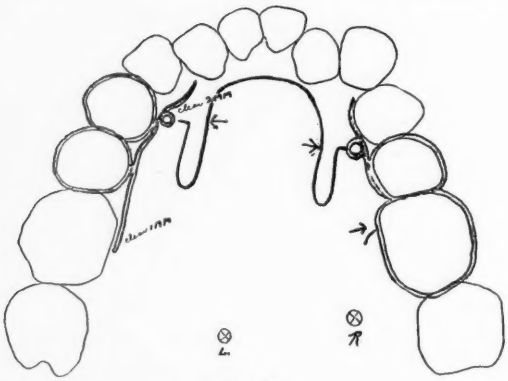


Fig. 15.

flat against the paper with the inner surface tangent (Fig. 16-e) to the gum outline of the tooth and points on the line of direction. Where these points touch, is the mesio-distal diameter (Fig. 16-f, g).

Drawing No. 3 Malocclusion (Fig. 10). We invert drawing No. 1 (upper survey) so as to bring the right side on the right and the left side on the left. Drawing No. 1 is inverted, because we have to survey the model of the upper in an inverted position, namely, teeth upward, and superimposing a new sheet of tracing paper we trace all the points enumerated in the above list for drawing No. 3, being extremely careful never to forget the registration points. When the ink has dried, we place this drawing over No. 2 (lower survey) right side up, being

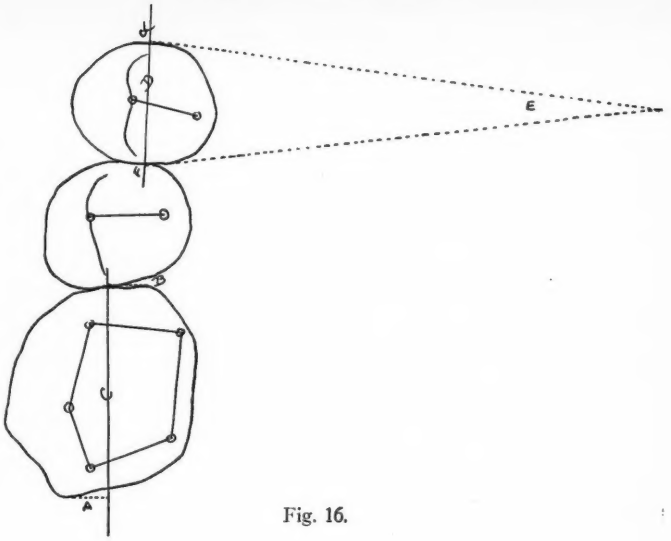


Fig. 16.

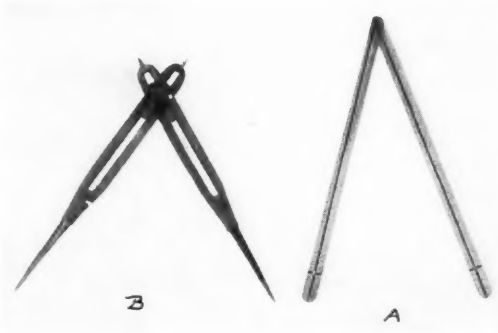


Fig. 17.

careful to superimpose the registration points with accuracy. We thumbtack the drawings in this position on the board and trace through the points of interest in red ink. This gives us a drawing of the full denture, as at present in malocclusion, showing exactly where every cusp touches its occluding spot. Just the same as if we were examining and occluding the denture through a skull of transparent glass, viewed from directly above.

Our next step is to design the arch for the teeth in occlusion, and the following data are necessary:

1. Molar fit. 2. Mesio-distal diameters. 3. Overhang. 4. Overlap. 5. Overbite.

The *Overhang* is the projection of the upper molar beyond the lower molar in buccal-lingual direction.

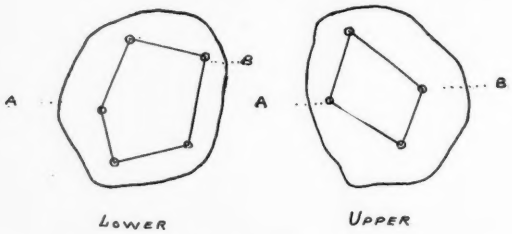
The *Overlap* is the projection of the lower molar beyond the upper molar, mesio-distally.

The *Overbite* is 1st, vertical difference in level between the incisal edge line of the centrals at the median line. 2nd, (horizontal) is the horizontal distance between the incisal edges of the upper and lower, measured at and along the median line.

Fitting the Molars

The molars are fitted on separate pieces of tracing paper. The fitting of the molars is done for the map of occlusion (Fig. 11), therefore if the molars are perceptibly tipped from their position, the models should be placed in such a position in the surveying apparatus for projection of *each* molar as will give it approximately normal vertical axis. If the molars have an approximately normal vertical inclination they need not be separately projected, but may be traced from drawings Nos. 1 and 2. In the normal upper molar the ratio of the projected distance from the buccal ridge to the buccal gum line, to the projected distance from the lingual ridge to the lingual gum line is 1 : 2

a : b :: 1 : 2



In the lower molar the ratio is 2 : 1.

If present, the permanent 1st molars are the ones to be fitted; if these have not as yet erupted, the 2nd or 1st temporary molars are selected in the order of preference mentioned.

It is often desirable to fit a 2nd permanent molar with a 1st one, or to fit 2nd permanent molars where teeth are missing, or so badly mutilated that all landmarks are missing.

Using the separate molar drawings (on transparent paper) just described, superimpose the upper upon the occluding lower so as to make the following points correspond as nearly as possible:

(a) Mesio-lingual cusp of upper and deepest point on occlusal sulcus of the lower.

(b) Mesio-buccal cusp of upper and buccal groove of lower.

(c) Disto-lingual cusp of upper and the distal end of the occlusal sulcus of the lower.

(d) The mesio-distal diameters as nearly parallel as possible.

If all these conditions are not simultaneously attainable, that fit is taken which divides the discrepancy equally, unless the mechanical fit at any point prevents any compromise, or limits same, in which case the discrepancy is divided between the remaining points.

After deciding on the proper molar fit, the drawings are registered by placing a piece of carbon paper between the drawings and with a lead pencil *two circles containing the operator's initials* are placed on the drawings of the upper molar.

If the mesio-distal diameter of the lower is not parallel to the mesio-distal diameter of the upper, another lower mesio-distal diameter is drawn which is parallel and is at a mean distance of 1 mm. of the lingual side of the two buccal cusps and the new length of mesio-distal diameter is found as previously described. The distance between these mesio-distal diameters of the upper and lower molars, is the *overhang*. The distance between the mesial end of the diameter of the lower and the projection on this diameter of the mesial end of the diameter of the upper is the *overlap*.

Overbite. Only the horizontal overbite is needed in arch design, but this depends upon the vertical overbite being proportional to some power of it, depending upon the shape of the upper incisors, as will be discussed later.

The variation is between about 1.5 and 2.5 mm. and as long as the overbite remains within these limits it is not necessary in ordinary cases to determine it with precision—the other conditions being of greater importance.

55 West 39th Street.

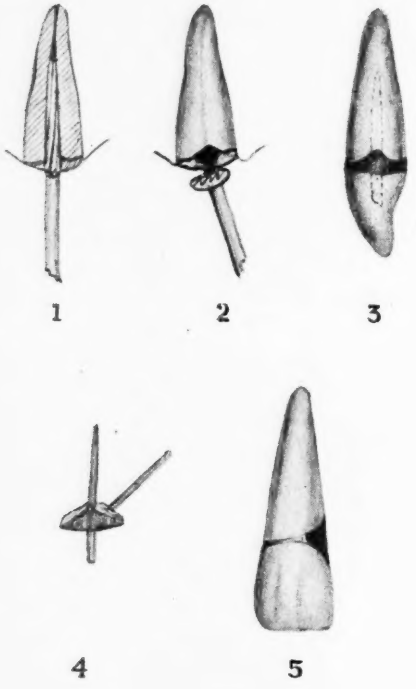
(*To be continued*)

Illustrated Steps in Crown and Bridge Construction*

By Anastasis G. Augustin, D.M.D., New York City

Cast Base Crown

This form of crown is utilized mostly in broken down roots and wherever the bite will allow the use of a long tooth. Fig. No. 1 shows the canal is being shaped by the use of a reamer to conform generally



to the root end of a platinized-gold clasp-wire 14 gauge tapering towards the apex. With a root-facer give the end of the root the rounded slopes as in Fig. No. 2. The decayed or broken down section of the root is cut away; close-bite cases predominate, therefore it is advisable to prepare the root so as to require the least cutting away of the porcelain

conserving its strength. After fitting post and crown to fit to the bite, take impression of cast to be made, as in Fig. No. 3; there should be no wax on the buccal side to prevent the display of gold. With the post in position build up the root with inlay wax, then with the crown forced in position in the wax, shape the wax to conform to the general shape of the neck of the crown. Remove wax and post together, as in Fig. No. 4, invest and cast in 20-22 karat gold; fit crown in position, ready to be cemented, as in Fig. No. 5.

Correct articulation in all cases to avoid undue stress is important, also the menace to the surrounding tissue in cases of ill-fitting appliances are great. Although cancer is a constitutional disease, it has local manifestations, and whenever it appears in the oral cavity, it is usually due to an irritation caused from an ill-fitting crown or a dental appliance.

Cast Base Crown is used in restorable roots, decayed under the gum margin; the casting at the labial part must be very thin in anteriors and in bicuspids; in molars rarely employed. In bicuspids with two roots, a 31-gauge 22-karat gold plate burnished over the root, then a 14-18-gauge platinized gold wire inserted into the canals, relations taken and soldered.

Anthony's Dental Dictionary

Anthony's Dental Dictionary, published by Lea & Febiger, Philadelphia, is all that its title implies and more; it is the best dictionary ever compiled for the dental profession and should be, *not* "in every dentist's library," but placed in plain sight and easy reach on every dentist's desk or study table.

Dr. Anthony, the author, who is associate editor of the Dental Cosmos and Chairman of the Committee on Nomenclature of the American Dental Association has brought to his work a wide experience and an intimate knowledge of the needs of the profession, and these are reflected in the book. The author's choice of plates is especially to be commended, and a careful examination of the volume leaves the reviewer with the feeling that a much needed work has been done by the right man.

L. W. D.

A Picture History of Dentistry

By H. H. Manchester, New York, N. Y.

IV.—In the 16th Century

The 16th Century was a period of anatomical study, during which many of the statements of Galen and the classical writers were re-examined. For this reason some of the illustrations of that time of interest to dentistry are furnished by such works.

One of the most important of these anatomists was Vesalius, who lived between 1514 and 1564, and was the first to modify, to any great

Engraving of a dentist's shop by Jost Amman, 1568, which, accompanied by verses, throw a vivid light on his business.

extent, the beliefs of Galen on anatomy. Among his engravings is a cut of the teeth showing that he understood the form of the central cavity. This was an important advance, but the cut itself is too modern in appearance to need reproducing.

An engraving which throws a most vivid light upon the business of the ordinary dentist of that time, is by Jost Amman. In 1568 a

number of small woodcuts by Amman were published to illustrate the work of all the different craftsmen and guilds of the time. As these were intended to be sold to the members of the different guilds, the pictures were quite exact, and the verses underneath them such as would pass muster among those whom they described.

Amman's cut, the title of which may be translated "The Tooth Breaker," shows the dentist at work with some kind of forceps in the mouth of his patient. On the table are several salves and ointments, while above it are hung a row of teeth on a line. Such a show of extracted teeth acted as an advertisement, though sound teeth were sometimes used to replace lost ones, and were bound into place with gold wire.

The verses underneath the cut give astonishing details in regard to the dentist's business at the time, and may be translated as follows:

"Whoever has an angry tooth,
I can bring it out forsooth,
As laboring women bear a child.
Also my shop I have well filled;

Of petrol and worm seed there is no lack,
Treacle and much gnat agarac;
Likewise good salve for fleas and lice,
And powder too for rats and mice."

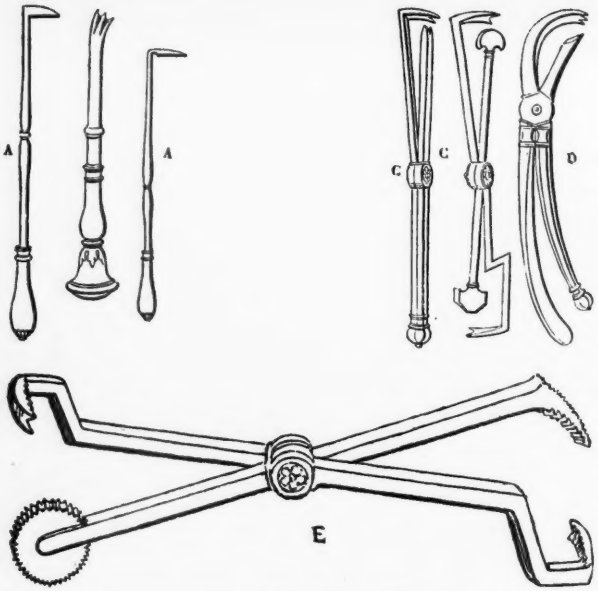
If we believe the evidence of these verses, and it is almost impossible not to, the ordinary tooth puller tried to overcome not only the affliction of an aching tooth, but most of the seven plagues of Egypt as well.

Another important point is that the picture was included among a set which dealt with craftsmen who were associated in guilds. This implies guilds of dentists, and there is other evidence that although the guilds of the dentists never approached the importance of the merchants' guilds, or the bakers' guilds, or those of many other crafts, including the corporation of surgeons, they were nevertheless in existence in various countries.

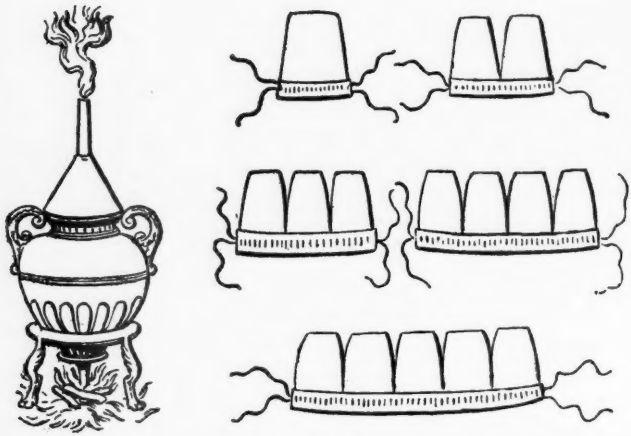
In the guild system apprentices worked for several years before they became journeymen operators. The journeymen had to work for two or three years for wages under a master before they themselves became masters, and "free" to practice their art in the city to whose guild they belonged.

A humorous story illustrating such a situation is told by Ambroise Paré (1517-1592).

"A master dentist at Orleans by the name of Louys had a new journeyman working for him by the name of Picard. A patient with an aching tooth coming in, Picard attacked it with such zeal that he



Various dental instruments. From Paré.



Special pot in which vinegar and other medicaments were heated, showing vapor used to relieve an aching tooth. Also artificial teeth. Both pictures from Paré.

pulled out three instead of one. The patient thereupon set up an awful howl, but Picard told him to 'shut his mouth,' for if the master saw the three teeth out he would charge him for the three instead of one. This so frightened the patient that he stopped his outcry and concealed the malpractice from Louys."

Paré himself had been apprenticed to a barber, and when little over sixteen had pulled teeth for a surgeon barber.

The dentist as represented by Van Vliet, about 1600.

In his medical work he states that teeth which had been knocked out by a blow or fall, might be replaced and grow into position, and declared that a princess who lost a tooth, had transplanted into her jaw one which was drawn from one of her ladies in waiting.

In extracting teeth Paré suggested that the patient be placed on the ground, or on a very low seat with his head between the legs of the operator.

The illustrations in his work show a cautery, files, and various instruments, some of which we reproduce. There is also a curious pot which was filled with wine, vinegar, and other medicaments, and heated so that the vapor would, so it was said, relieve an aching tooth.

Paré said nothing about filling teeth, but gives a cut of artificial teeth bound in with gold or silver wire.

Good evidence of how poorly such artificial teeth fitted, is the statement by Peter Forest (1522-1597) that the whole mouth was often violently inflamed by artificial teeth of ivory fixed with wire; in fact, he considered the consequences so serious that he advised against their use at all.

(To be continued)

Postoperative Pain

By C. E. Whiting, D.D.S., Brookings, S. D.

Postoperative pain and complications are probably due to three things—the operation itself, the reaction of the pathological tissue, and to the local anesthetic which has not been properly administered.

To combat afterpain, a definite technic must be followed. First the area to be operated upon and the point of injection must receive the proper preparation. One of the best things to use is equal parts of iodine and alcohol. The gum on the buccal, labial, occlusal and lingual, also cheek, should be well dried and painted with this solution, and should be kept dry at least until after the injection. Before applying the forceps the tooth should be well cleaned of all infected material, for if this is forced into the gum, more or less trouble will follow. The iodine and alcohol solution is very good to clean up a tooth before extraction.

Strict asepsis should always be practised. Plenty of time should be taken during the operation; thoroughness is never sacrificed for speed. The employment of a sterile, physiologic, isotonic Ringer solution, slowly injected will help.

Distilled water which is kept indefinitely will undergo disintegration, and should never be used after it is a few days old. It is not a good practice to buy distilled water of a druggist or any one else, for you do not know how old it is.

It is best to make your own distilled water. A fresh supply should be made up every two or three days.

The novocain solution should be made up fresh at the time of injection. It is best to use tablets containing the proper amount of ingredients to make up your Procain-Suprarenin Ringer solution.

Boil the distilled water a few minutes before adding the tablets, and then just bring it to the boiling point (do not boil). Let cool a little and then it is ready to use. The boiling of the Ringer solution is the cause of a good deal of afterpain. The injection of a stale solution of any kind is very dangerous.

Careful manipulation of the tissues during the injection and operation will eliminate trauma, laceration and shock. Wounds which result from the removal of a tooth are better left with the blood clot as a dressing rather than to pack with sterile gauze. Sometimes after the surgical removal of a bad tooth the socket is left dry, and it is a good plan to pack these sockets with a sterile paste, which is made up as follows:

Anesthesin	gr. xxv.
Chloretone	gr. xxv.
Menthol	gr. v.

Oil of wintergreen gr. v.
White vaseline (sterilized) oz. 1.
Misce.

Fill socket or bone cavity with compound; apply with syringe and large curved needle. Packing a socket with a sterile gauze dressing under pressure, in many instances produces irritation, inflammation and increased pain.

The first and most important factor is the injection of a solution which is not isotonic; that is, one that is readily assimilated by the blood and one that will not disturb the osmotic tension of the blood.

Dr. Fischer advises the use of an isotonic Ringer vehicle in preference to one made up from sodium chloride alone.

Injecting the solution too rapidly into the tissues causes the distention or "ballooning" of the tissues, which results in tissue injury. The solution should always be injected very slowly. The needle should be moved slightly back and forth during the discharging of the solution.

A great deal of trouble is caused by injecting the solution into muscle tissue or a ligament. The injection of a solution which is too hot or too cold will cause afterpain. It should just be body temperature.

Care should be taken in washing a syringe and needle out with alcohol; always follow with boiled distilled water. A small amount of alcohol left in the syringe might cause extended anesthesia.

By injecting the solution under pressure will cause afterpain, especially when injected under the periosteum which separates it from the bone, besides the damage done by the needle.

Infection caused by using a solution that is not sterile, or using a needle or syringe that is not sterile, also by carrying bacteria on the needle from a mucous membrane that is not properly prepared, or by carrying saliva into the tissue are other causes of afterpain.

Repeated punctures of the tissues by needle or by withdrawing the needle and changing the direction several times is apt to cause more or less afterpain.

Excessive massage of the tissues over the point of injection, such as at the mental, incisive and infraorbital foramen is another cause.

Dr. Smith claims that if the correct technic is followed and the injecting solution consists of the proper ingredients and is properly prepared and injected, little or no pain will be experienced by the patient.

Some people claim that afterpain is caused by injecting into or near the nerve, but Dr. Smith claims that such is not the case.

Postoperative pain may be present in some individuals even if the best technic has been employed, and in such cases it is best to do what you can to give them relief.

The paste made up for this trouble injected into the socket will sometimes stop all afterpain.

One of the best remedies is the use of hot salt water, one level teaspoon of salt to one glass of hot water (as hot as it is possible to use). Hold this solution in the mouth until it cools, and at the same time rinse the socket out well and do this regularly for one hour after the extraction; and the socket should be well rinsed out after every meal for several days.

If the socket is in the lower jaw, it is a good plan to syringe it out several times a day for a few days. And this should always be done if it was a badly infected third molar. This method will relieve most cases.

The use of cold packs on the face, in case of inflammation, will be a relief.

Bromide salts are good, given in water in 15 gr. doses, repeated in an hour if necessary. Morphine is sometimes employed in bad cases.

Postoperative pain may occur in the immediate region of the operation, or it may be felt in remote places, such as headache, backache in women, and sometimes a general weakening, or it may occur within the area of a deep injection.

False ankylosis following the removal of an impacted third molar, or the reduction of a fracture, may occur.

Sometimes the patient will feel pain during deglutition to such an extent that solid foods can not be taken; hence a liquid diet is recommended. If extreme swelling of the parts in the region of the pharynx is present the patient should be given liquid foods, and in extreme cases nourishment should be given through a tube by rectum.

Vomiting seldom occurs after block anesthesia. Blood mucus and infected material entering the larynx or pharynx is the cause of severe coughing and postoperative pain.

Afterpain following the use of local anesthesia in its various branches, nerve blocking and surgical operations open a field to definitely determine its cause, is particularly fascinating.

A Testimonial Dinner to Dr. House

December 9, 1922, Indianapolis, Indiana

When it became known among the circle of his intimates that Dr. M. M. House intended to leave Indianapolis about the close of 1922 to become associated with the Deaner Dental Institute in Kansas City, a group of his friends in the profession tendered to him a testimonial banquet at Indianapolis on the night of December 9th, 1922. The affair would have been larger if notice of it had been more general, or the time for arrangements longer, but obligations which Dr. House could not avoid limited the time and narrowed the circle that could be included.

After a delicious repast, a number of Dr. House's more intimate friends responded informally to toasts. The substance of some of the responses follows:

TOAST, "FRIENDS"

By Dr. W. A. Giffen, Detroit

Among the things in the profession which we believe to be most hopeful omens is the growing habit of banquets like this. They iron out the differences between men and leave them in better condition to work together.

Indiana has furnished a number of men who have done much for dentistry. Approximately two thousand members of the profession have received their dental education and incentive to professional work in this city. In Dr. King, Indiana has furnished a man who has done more for organized dentistry than any other man up to this time. Dr. House has been a great incentive to many men, both young and old, in different parts of the country. If he had never done anything except demonstrate the advantages resulting from accuracy in prosthetic dentistry, he would be entitled to our respect and gratitude. But, in addition to this, he has taught the application of fundamental principles better and more fully than it had been done before.

It is unfortunate for Indiana that Dr. House is leaving. His loss will be greatly felt, but his work will go on. He is bound to make great progress in the future. I have never seen the Deaner Dental Institute, but if Dr. House becomes identified with it, it is bound to develop into an institution that will do a splendid professional work for dentistry. Any institution with which he is identified must be successful. There is a field for the kind of work he is going to do that will be of great value to the profession. If we had more men

who would give up as much as Dr. House is giving up for the purpose of testing out opportunities such as this, we should get on faster.

Many members of the profession have a keen interest in Dr. House. He has done so much hard work and has been so fair and unselfish that we are under great obligations to him. It is a pleasure to be here and to pay him this tribute of respect.

TOAST, "THE MAN"

By Dr. F. R. Henshaw, Indianapolis

Anyone who has arrived at a predetermined goal, whatever it may be, must have a lot of the quality which we call "man"—just plain man. Among the things which distinguish the kind of man about which I am talking, the ability to stick to a line of thought or effort regardless of obstacles is one of the most important. That ability to stick is one of Dr. House's greatest qualities. And that is the reason why things that would be insurmountable for most men have had to give way in the face of his determination.

I know that he has had to carry on a vigorous fight, not only with a lot of exterior things, but with things within himself. No man can have so much of the ability that carries him onward that he does not some day reach the place where his heart fails him. I know that Dr. House has experienced days when he wondered whether or not it was worth while to go on. He had the strength of purpose and will-power to carry on. He has given to all of us of his genius, and to our betterment.

Another characteristic of the real man is the generous purpose which causes him to be willing to share with the other fellow who does not possess as much talent or indomitable will.

Friendship is most glorious among the things that the world holds for mankind. I do not know any person who has deserved the friendship of Dr. House who has not gotten it. Whenever he finds a man who, in his opinion, is worthy of the high esteem which his friendship implies, he gets it in full measure. I feel that all of us are better because of the friendship which he has so unreservedly given us.

In his chosen field, Dr. House is pre-eminent. Those of us who know him most intimately feel that the labors which he has imposed upon himself for many years, merely for the purpose of carrying out his ideals, have been wonderfully fruitful of good for the profession.

Indiana and Indianapolis are losers because he is going away. We feel that we are just loaning him to the profession of Kansas City, and that he will come back.

TOAST, "SERVICE"

By Dr. W. R. Meeker, Peru, Indiana

Dr. House, the service you have rendered mankind will live far beyond the years we expect you to live. When we think of the word "service," we must think of things that endure, because service for humanity is one of the things that endure. Great earthly monuments have always been raised to different people. They soon pass away, but the service a man leaves lives and is brought forward from year to year.

I have in mind a man quite the opposite of Dr. House, one who had acquired thousands of acres before he passed away. I know that he never had such an evening as this. He never had people feel toward him as we feel toward Dr. House. We all realize that the greatest thing we can do for humanity is to render unselfish service.

During the war one of my partners, after a few months in the transport service, was incapacitated with an abscessed tooth. I saw such men suffering from defective mouths and recommended that the mouths be put in better condition, with the thought of upbuilding the men. We established a clinic in New York City, with the thought of manning the service by dentists from different parts of the country who would volunteer their services. I have a letter saying, "I want to be the first man you call to New York for that service." It is signed, "M. M. House."

Dr. House, we all feel grateful for the service you have rendered, and we are trying to express our regard. I am glad to express personally my thanks for the many forms of service you have rendered in the past.

TOAST, "APPRECIATION"

By Dr. Otto U. King, Chicago

"The many will follow the beaten track
With guideposts on the way,
They live and have lived for ages back
With a chart for every day.
A few strike out, without map or chart,
Where never a man has been,
From the beaten paths they draw apart
To see what no man has seen.
There are deeds they hunger alone to do;
Though battered and bruised and sore,
They blaze the path for the many, who
Do nothing not done before."

Personally, and on behalf of the 32,000 members of the American Dental Association, I want to extend greetings to the honored guest of the evening. It is a fitting tribute to Dr. House that this testimonial dinner should be given to him by those who are in daily touch with him. A few days ago, one of the greatest dentists the world has ever produced passed away without the dental profession having had an opportunity, in an official way, to pay just tribute to him for his scientific discoveries.

It is a great honor to have your own professional brothers, friends and neighbors recognize you as a great man while you are still with them. Before you are a vanished friend, we are "saying it with flowers."

"Around the corner I have a friend,
In this great city that has no end;
Yet days go by and weeks rush on,
And before I know it a year is gone;
And I never see my old friend's face,
For life is a swift and terrible race.
He knows I like him just as well
As in the days when I rang his bell
And he rang mine. We were younger then;
And now we are busy, tired men—
Tired with playing a foolish game,
Tired with trying to make a name.
'Tomorrow,' I say, 'I'll call on Jim,
Just to show that I think of him.'
But tomorrow comes and tomorrow goes,
And the distance between us grows and grows—
Around the corner, yet miles away.
'Here's a letter, sir; Jim died today.'
And that's what we get—and deserve in the end,
Around the corner—a vanished friend."

I have somewhere read of an eastern legend which tells of a wonderful magic vase, known as the vase of life, which was ever full of a mysterious liquid. No one was able to tell what this liquid was. The marvellous thing about it was that whatever one dropped into it would overflow and run down the sides of the vase. The depositor would always get out of this magic vase exactly what he put into it.

Life to me is such a vase. "Whatsoever a man soweth, that shall he also reap." Life will run over to you only that which you drop into it—nothing more, nothing less, nothing different. If we drop into life generosity, tolerance, kindness, helpfulness, usefulness, efficient

service, the vase will run over to us the same things in amount and quality.

During all these years, you have evidently been dropping into your magic vase a great deal of hard work, dead-in-earnest work, a vigorous determination to attain success in your chosen specialty; hence, this testimonial banquet to you tonight means that your vase of life has overflowed with such scientific dental accomplishments and unselfishness to others that your friends and professional brothers are trying in a small way to return to you their thanks and appreciation.

This is not a last supper; neither is it a feast given by distinguished men to a returned prodigal son; but it is not unlike that little group of friends that met around the family circle when Lazarus returned home after being restored to life and health. This is to be a real love feast in which you are the honored guest. Therefore, it is a great privilege to have the opportunity of participating in this program.

If there is any law of the universe emphasized over and above all others, it is that like produces like everywhere and always. Dr. House, your dearest friends in the dental profession are reminding you tonight in this beautiful banquet that your harvest has been one hundredfold for the advancement of dentistry and the making of true and loyal friends.

"If with pleasure you are viewing any work a man is doing,
If you like him or you love him, tell him now.
Don't withhold your approbation till the parson makes oration
And he lies with snowy lilies o'er his brow;
For no matter how you shout it, he won't really care about it,
He won't know how many teardrops you have shed.
If you think some praise is due him, now's the time to slip it to him,
For he can not read his tombstone when he's dead.

"More than fame and more than money is the comment, kind and sunny,
And the hearty, warm approval of a friend;
For it gives to life a savor and it makes you stronger, braver,
And it gives you heart and spirit to the end.
If he earns your praise, bestow it; if you like him, let him know it;
Let the words of true encouragement be said.
Do not wait till life is over and he's underneath the clover,
For he can not read his tombstone when he's dead."

It is worth while to study the lives of the great masters, to learn of the principles underlying their success in their special fields. Don't

fool yourself into believing that the great masters are fakers. It was not by any sort of electioneering, jockeying or managing that Bacon, Plato and Emerson were elected to their special positions as thought rulers. Beethoven, Mendelssohn and Wagner rose as the stars rise. No pushing helped them. No hampering hindered them. When you come to the genuinely great men and things that the world brings down to you, you are in the presence of actual cosmic forces. Gray matter is what makes the man—the amount of brains he has and the quality, and the way in which the gray matter works.

Dr. House, what a tremendous satisfaction there is in the consciousness of being an expert in your field, in being looked up to as an authority in your calling! This is more than compensation for the price you have paid for it, for all the pains you have suffered and the sacrifices you have made in becoming an expert.

I have watched you climb the ladder of fame in dentistry, and also noticed your loyalty to your friends. I am persuaded that you have paid the price, and tonight, at this farewell dinner, we are trying to return to you in spirit the unselfish devotion you have given to us in our profession.

For many years you have gone up and down and back and forth across this great land of ours preaching and prophesying a better dentistry. I am wondering if you yourself realize the tremendous force you have been for the raising of dentistry to a higher educational standard.

(Dr. King then gave a complete list of Dr. House's contributions to dental literature.)

Dr. House, there is something about you that we like, and this is the highest tribute I can pay you. May I make my meaning clear by illustrating?

One night, during the National Meeting in New York, a violinist stood up to play in a café. There had been much music all evening to which no one had listened. He had played but a few strains when the chatter of tongues and the clatter of dishes stilled. He was heard in breathless silence. When the last wails of the strings died away in a sad little cadence, there was a moment of hushed silence, for there were tears in every memory; then came a burst of warm applause. For there is fiddling and fiddling, and it is the added something that reaches the heart.

During the World's Fair, there hung in the Fine Arts Building the paintings of great artists, pictures with perfect technique and some that won the prize, but in one corner the crowd all day long gathered about a small picture of a boy leaving the old home, and many an eye was moist as it turned away. I do not know what technical excellence

it lacked, but it took men and women, took their souls, and it had the added something.

Dr. House, you have advanced the cause of dentistry. You have inspired men and encouraged them to love dentistry; your friends know that you have the "added something." Your life's vase has run over; you have given to the profession the best you have; and now the profession is trying to give it back to you.

"I am selfish in my wishin' every sort of joy for you;
I am selfish when I tell you that I'm wishin' skies of blue
Bending o'er you every minute, and a pocketful of gold,
An' as much of love an' gladness as a human heart can hold.
'Coz I know beyond all question that if such a thing could be
As you cornerin' life's riches you would share 'em all with me.

"I am selfish in my wishin' every sorrow from your way,
With no trouble thoughts to fret you at the closin' of the day;
An' it's selfishness that bids me wish you comforts by the score
An' all the joys you long for, an' on top o' them, some more;
'Coz I know, old tried an' faithful, that if such a thing could be
As you cornerin' life's riches, you would share 'em all with me."

TOAST, "THE FORWARD-LOOKING TEACHER"

By Dr. George Wood Clapp, New York

In the Gospel, as recorded by Mark, is found the verse which is often quoted and often misquoted. It reads, "A prophet is not without honor save in his own country, and among them of his own kindred and his own household." The word "prophet," as there used, does not refer primarily to one who foretells future events but to one who teaches the things likely to affect the development of the race in the future, that is, the one who teaches with his face to the future. The words from which the English word "prophet," as used in that verse, is derived limit the meaning to one who teaches by a form of inspiration, by the continual bubbling up, as in a spring, of helpful, instructive and constructive things into his consciousness.

Even the most casual review of the activities of Dr. House's life shows that he has been continuously a teacher of such things, as applied to dentistry. He might have stayed at home and developed a very profitable practice, but the continuous development of new material in his own consciousness and the urge to impart it to others for the benefit of all were so strong as to lead him to neglect personal gain and spend his time and strength in organization, co-ordination and teaching.

Possibly the reason why a prophet is so often without honor in his own country is that he may be great only in one way and that in other ways he may be ordinary or very small, and perhaps very irritating, as, for instance, Carlyle must have been. And because the home folks come hourly into contact with the small and irritating characteristics and are not far enough away to get a perspective of the really big things in life, the teacher who is really great to those afar off who do not know him too well may be not only without honor in his own country and household but cordially disliked.

When those with whom a man, engaged in such teaching, has associated continuously and closely hold him in high esteem and are glad to do him honor, it is evident that his life is big in more than one faculty and that the bigness has so far subordinated things which might otherwise be irritating that even his nearby associates hold him in honor. This gathering is visible testimony of such honor by men with whom Dr. House has been closely associated, of whom I am glad to be one.

We all expect Dr. House to succeed in his new work because we expect him to carry to it the same qualities which have made his work successful elsewhere; and we wish for him all the success of which he dreams.

TOAST, "A TOKEN"

By Dr. David House, Indianapolis

Dr. David House, or "Dave," as he is popularly known to distinguish him from Dr. M. M. House, spoke in an affectionately humorous vein of the likenesses and differences between himself and Dr. M. M. House, and at the conclusion of his remarks presented Dr. M. M. House with a fine token which he could always have with him, could frequently use, and which would serve to keep fresh in his mind the affectionate interest of his friends in Indiana.

RESPONSE

By Dr. M. M. House

After the toasts had been given, Dr. House began by saying that he was born a Sucker, raised a Jayhawker and adopted a Hoosier.

He said that whatever he had been able to accomplish in Indiana had been made possible in no small degree by the friendship and loyalty of men in the profession, that he did not expect to find better or more loyal friends elsewhere than in Indiana, and that he was going to Kansas City to test out an idea which had never been completely proven, but which he believed capable of great benefit to the whole profession. He then told very briefly the story of the Deaner Dental Institute and of his connection therewith.

Oral Hygiene Luncheon

Ohio State Dental Society

(This brief resumé of some of the addresses at this luncheon is published through the courtesy of The Dental Summary in which an authentic report will appear.)

At noon on December 5th, 1922, at Hotel Sinton, Cincinnati, there was served an Oral Hygiene luncheon combining the ideas of McCollum, Seccombe and McCann. It was explained that it is impossible to balance a lunch with the other meals of the day because different men eat different breakfasts and dinners. The formula of the luncheon, as served, presented a balanced ration. It was an excellent luncheon with the following menu:

Celery

*

Spinach String Beans

Brussel Sprouts
Cauliflower
Cabbage

Poached Egg

*

Fruit Salad—Dressing of Lemon Juice and Strained Honey

*

Whole Wheat Bread
Milk

This luncheon presented an excellent idea which other societies might use to advantage. It immediately followed one dental meeting and preceded another. The main portion of the luncheon was served as a plate lunch, and the service was rapid. The dishes from the dessert course were left on the table until the speakers had finished, which gave the early speakers a quiet room and permitted a rapid change of the tables after the diners had left.

The speaking program suffered from the presence of too much material. It seems impossible for a committee making up a program, where the speaking is limited to fifty minutes, to satisfy itself with four or five speakers and give each ten minutes. There were ten speakers on this program, each of whom had excellent material. Determined efforts by the presiding officer to limit the speeches to five minutes merely succeeded in rushing those who were conscientious and securing extra time for those who would not limit themselves.

The toastmaster, Dr. Sidney J. Rauh, introduced a number of speakers representing different fields of health work. The first of these was Mr. Bleecker Marquette of The Public Health Federation of Cincinnati, who said in effect that in few other fields of general public health work had more substantial progress been made than in the oral

hygiene field; that no public health program would be complete without it; and that no public health worker who is on to his job fails to realize the importance of dental hygiene. He emphasized its importance, in connection not only with the health of the teeth and the gums but with the health of the whole body, especially through the relations between apical infection and systemic disease.

The Cincinnati dentists have shown reason and intelligence in getting their oral hygiene program across. They have co-operated with workers in other fields and there has recently been organized a Mouth Hygiene Council to extend the work into the county. Cincinnati dentists have offered free service, and a fine program of dental inspection has been carried out. It is proposed to follow up the campaign by remedying defects in the teeth, and dentists have offered to give their services free when necessary. Co-operation of this sort is a credit to the dental profession.

Dr. Gillette Hayden, speaking to the subject "Pre-natal and Infant Care in Relation to the Mouth," began by saying that her task was to focus the interest of the hearers upon the child with structurally well built teeth and investing tissues. The heritage of the child does not come entirely from its immediate parents, but these are the persons whom the health worker must use. Parents can and do control the equipment of the children to an unknown degree, and upon them rests the responsibility of being physically and mentally fit to become parents. The dental profession should unite with other interested groups in the task of preparing men and women for parenthood.

An especial responsibility rests upon the mother. It depends upon whether or not the child receives the kind of nourishment it needs for the construction of the teeth and investing tissues. She is charged with finding food rich in the elements necessary for the structure of the teeth, as calcium, phosphate, iron, etc.

We are accustomed to think of food as something necessary for growth and maintenance of health without considering the kind of growth or degree of health of the tissues. We are not accustomed to think of food as an important factor in producing tissues of superior quality. Only tissues of high grade are fortified against disease. The kind of food required to build healthy structures is the same kind as is required to maintain healthy structures. Tissues of poor quality are a prey to disease. Right nourishment and health are partners.

Dr. Ann L. Buntin responded to the toast "The Dental Social Worker." She answered the question, "What is meant by 'dental social worker?'" by relating some recent experiences.

She had inspected three county schools having respectively seventy-five, thirty-three, and fifteen pupils. The first was located in a small

township; the other two were one-room schoolhouses in the country. In the first, the children were suffering from all the inconveniences and vices of a township, with few of the real advantages of country education and none of the advantages of city education. Their mouths showed the use of city confections. They were located two miles in one direction and four miles in another from a dentist. Twenty-five per cent of them had toothbrushes. Except through the county nurse, they had had no dental education. The older boys and girls were suffering from poor dentistry. One girl had eight cavities, although she had been dismissed by her dentist only two weeks before. The conditions in this school-group seemed deplorable. Teachers and principal were anxious to know what they might do, and I tried to make of them dental social workers.

In the second school inspected, thirty-two of the thirty-three enrolled were present. This school was farther from town than the one just described, and only three of the pupils had had dental work done—thanks be! Their mouths were not clean but they were better than those in the first school mentioned. Half *said* that they had toothbrushes. There was one teacher for all ages from five to seventeen, and she was very sympathetic, but from her years and experience we can not hope for a strong ally. The children, however, promised to clean up, although they were situated six miles from a dentist or a drugstore.

One of the great pities is the six-year molar with a tiny cavity—another tragedy, and food for the exodontist!

In the third school were found twelve pupils, three little ones having been dismissed early. This was situated among dirty surroundings, and they were four miles in one direction and eight miles in another from a dentist or toothbrush store. I showed them how to brush, and they were very attentive, but the whole problem must be met by the process of education.

The dental social worker must be an educator, must live among her people in order to know their needs and conditions, must have good dental sense, know teeth and the value of them, and must know people. It is of no use to tell children to brush their teeth and to go to the dentist unless we see that toothbrushing is possible and dentistry accessible. Why ask teachers and principals to co-operate, when they left normal schools, universities, etc., with better information about all health subjects than about teeth, one of their greatest assets? No wonder Mothers' Clubs listen! How much has the eighth grade commencement found parents knowing about health responsibility for their children's teeth!

We owe our nurses, both district and county, a great deal. But at present there is no definite, well formulated system in schools, training schools or colleges. It is a big job, and the only solution is the trained

dental social worker. I hope when the final curriculum for the dental hygienist is outlined, it may include certain social training, so that she may go out not as a commercial asset to the profession but as an educator and helper of the children of men.

To Dr. C. T. Epling of Welch, West Virginia, had been assigned the subject "How West Virginia Establishes Dental Clinics," and he spoke, in substance, as follows:

The McDowell County Dental Clinic began with an Enabling Act of the Legislature passed January 24, 1919, followed by the ratification of the people of the county at a special election held on June 21, 1919. According to the terms of this Act, as ratified by the people, the County Court was authorized to levy a small tax on all the assessed valuation of property in the county for the maintenance and support of the clinic. The work was begun in September, 1919, with twelve dentists and eleven hygienists working under the direction of a County Dental Director, who was appointed by the County Court, as provided in the Enabling Act.

The relation of the County Dental Director to the County Court is very much the same as that of a school superintendent to a Board of Education. The County Court determines the general policies with the advice of the County Dental Director. The County Dental Director, like the superintendent of schools, is the paid expert and executive officer in charge of the work, as well as the chief adviser of the County Court on matters relating to his department. Of course, the County Dental Director employs all assistants and directs their work.

Taxes assessed for the purposes of the Clinic are collected by the Sheriff, as are all other county funds. The funds collected for the Clinic cannot be used for any other purposes. They are paid out by order of the County Court, just as school funds are paid out upon orders of the several boards of education in the county. The Clinic funds are audited in exactly the same manner as are all other county funds.

Most of the dental clinic work is done at the schools. In most of the new buildings dental clinic rooms have been provided specifically for dental service. In older buildings suitable arrangements have been made by remodeling or otherwise, whereby the dental work can be done at the school, in order that the children may have their teeth treated without any interruption of consequence in their regular school work.

Portable outfits are taken to the rural schools, where the country children, the ones most likely to have their teeth neglected, are treated with the same care and effectiveness as the children in the towns. These portable outfits are transported by wagon or on horseback, as conditions demand, to every one of our fifty country or one-room schools.

The volume of the work can be comprehended from the following statements taken from the reports of the County Dental Director:

First Year:	11,000 children treated.
	48,000 operations performed.
Second Year:	13,000 children treated.
	62,000 operations performed.
Third Year:	12,600 children treated.
	61,500 operations performed.

Dr. H. H. Snively, Health Commissioner of Columbus, Ohio, delivered a very interesting and instructive talk, of which some of the salient points were as follows:

If the State of Ohio will join next year in what the Federal Government is ready to do, we may have $80,000 or $90,000 to spend for the benefit of child hygiene; and much of it will be used in ways that will benefit mouth hygiene. We hope to do something for the expectant mother and her child and for the child in the pre-school years. We hope to do something about the matter of malocclusion in young children.

Last year we had someone from our central health department go to every normal school and talk to the teachers. One of the two things we emphasized was the survey of the health of the child and the other was such education of that child as would result in the formation of health habits.

We have 6,000,000 people under the charge of our department and only $200,000 to spend, or 3 1/3 cents per capita. That is all you paid last year to carry on this health work. If we can emphasize prevention and get you adults to submit each year to a complete medical survey by the physician and dentist, we shall have accomplished much. Parents should be made to see that the children are properly examined. If we do this and establish hygiene and health education, we shall do much to empty the jails.

Dr. Walter H. Brown of Mansfield, Ohio, responded to the toast, "The Child Health Demonstration and Oral Hygiene," and spoke, in substance, as follows:

I have charge of the demonstration for child health in one of the counties of the State. Out of funds furnished by the American Red Cross, $200,000 have been set aside to see what can be done in five years to build up the health of the children of the county. We have gone to Mansfield with no written program and made a study of the resources. We have enlisted the co-operation of all the agencies interested in health. We are establishing a course in health education. We want to teach children proper health habits by means of films and

lectures. We have demonstrated in a short time that it is possible to interest children in such way that they will do the things you ask them to do. We are establishing a county-wide nursing centre for mothers and children. We are furnishing pre-natal care.

The dental side of all public programs should have dental leadership. It has not had such leadership in the past because the dental profession has not come forward and taken it. We have reached the stage in our development where it is time for the dental profession to lay aside petty jealousies and to seek the other fellow's point of view.

Oral hygiene is making one of the largest contributions to the real fundamentals of health. It is important that the men and women of the future shall know how to select and eat good food and build up strong teeth.

Dentistry is the first profession that has had the nerve to say to its patients, "Come back in four months so that we can look you over." The people are looking to you to take the next big step in preventive medicine, but many of you are asleep to your opportunities. The opportunity is large enough to challenge the ideals in service of every one.

Preventive Dentistry in Adult Life

By Frederick A. Bricker, D.D.S., Rochester, Minn.

This account is neither official nor complete. It represents the impression made by the paper upon one in the audience.—EDITOR.

There were two facts brought out by the lecturer of the evening which were really the gist of his subject. The first was that we, as dentists, must educate our patients while we have them in the dental chair. The second point was that the dentist should learn the proper manipulation of the toothbrush and teach his patient that its intelligent use will prevent further dental treatment.

Dr. Bricker informs us that only 20 per cent of the public pays any attention to the question of mouth hygiene. It must follow that there is a crying need for bettering such a situation, and the dentist has this duty to perform.

The reasons for such neglect are ignorance, indifference, and poverty. To overcome these the dentist must resort to some of the expedients employed by big business. The first is to attract attention, then arouse public interest. A desire is thereby created and action follows.

Dentists must do the same thing in trying to impress mouth hygiene on the millions who require it. School boards should make this subject

Read before First District Dental Society, New York.

compulsory in a school curriculum. The advantages of a clean mouth and correct diet should be taught as a basis of health, and no better place for proper propagation of such wholesome doctrines could be selected than the educational centers.

Patients should be taught the causes of decay as part of their dental education. It need not be scientifically described, but it is enough for them to know that if food is allowed to remain on the teeth, acid is formed which will eat into and destroy them. It must be brought home that clean teeth do not decay.

With a disclosing solution or iodine, the patient should be shown the mucilaginous plaques about the teeth. He must be instructed that at least five minutes should be spent night and morning in the brushing process. The dangers of pyorrhea need not worry him if he carefully follows the rules of mouth hygiene.

Preceding his paper, Dr. Bricker gave a clinic during which he actually brushed the teeth of a patient in the chair. The toothbrush movement was different from that usually employed. In place of the rotary, up and down, and various other motions, Dr. Brickner keeps his brush stationary and just wiggles it. This method permits the bristles to enter between the teeth and actually cleanse the interdental spaces. It does not matter whether paste or powder is used. The real success lies in the vigorous brushing. When the toothbrush is not in use it is kept in a retainer containing common table salt. This prevents bacterial growth.

During the process of brushing, Dr. Bricker mentioned that passing the toothbrush across the occlusal surfaces of the molars, merely touched the high spots, which after all never decay. The wiggly motion brings the bristles down into the fissures and gets these vulnerable places clean.

Bleeding gums are caused by stagnation of the blood. The toothbrush stimulates the circulation and maintains the gingiva in a healthy condition. When the gums bleed it is a sign that they need more brushing. At regular intervals the tartar beneath the free margin of the gums should be removed. This tartar is composed of food, saliva and lime salts, and will not collect if proper brushing is maintained.

Dr. Bricker felt that pyorrheal pockets form between teeth because the depression between the roots do not receive sufficient stimulation through brushing. The gums need the toothbrush as well as the teeth.

In concluding, the essayist deplored the fact that dentists, as a rule, failed to spend the necessary time in the dental education of their patients. If we really wish to practise preventive dentistry, it must begin with the spreading of proper information, and there is no better place to preach from than beside the dental chair.

The Relation of Periodontology to Preventive Dentistry

Summary of remarks by Russell W. Bunting, D.D.S., at the dinner of the American Academy of Periodontology, Cincinnati, December 4, 1922

When we review the progress of this organization during the past nine years, we cannot help but feel a pride in what has been accomplished. It was organized by loyal men and women who believed in preventive dentistry. It was founded on the work of Drs. John W. Riggs and D. D. Smith, and its scope has been added to during recent years by members of this Academy who have written and spoken generously, who have studied the problems intensively and who have stimulated dentists everywhere to higher and higher planes of preventive service.

The question arises, however, "Is this Academy doing its full share as exponents of preventive dentistry?" We have noted the crises through which general dentistry has gone, in that it has been checked in its advance toward higher and higher degrees of operative dentistry by the question of the safety of many operative procedures. The challenge of our methods of practice has made dentistry pass through a self-searching process by which she has examined minutely the various operative procedures in the light of their relation to the general health. Many problems have arisen which are extremely serious for which no solution at present is forthcoming save one, and that is the prevention of dental disease.

Dentistry has learned that she cannot dam the river of dental disease, and now she is seeking to trace back along the stream in the attempt to check it at its source or to dissipate its energies. Whatever the outcome of dentistry may be in the future, at the present time and in the years to come the great problem will be prevention. The problem is a big one, and as we view it, there seems to be little that we can do for the present generation. If we hope to make any real progress in preventive dentistry, we must direct our limited energies toward the children in the public schools in order that we may protect the next generation from the ills which have befallen their fathers and mothers.

The questions arise, "Who is going to do this work in the schools?" "Where can we find enough dentists?" The answer is that there are not enough dentists. Your president suggested in his address today that this body should foster the training of dental hygienists for the good that they may do in the public schools. We in Ann Arbor have a school for dental hygienists, but we are not at all certain that they will meet the situation. We are not certain that the mere cleaning of teeth will solve the problem, for we do not see how children can be

cared for properly unless the cavities which do appear in the teeth may be filled while they are small. This is a problem that must be considered very carefully and should be solved in the very near future. It is possible that we may have to raise up a new order of dental operators with fewer years of training than a dentist, but with more than the present one-year course in dental hygiene. This new order of dental operators might be trained to do everything that is necessary for the care of the children in the public schools, working in conjunction with and under the direction of a graduate dentist. This is but one angle of the problem of preventive dentistry that exists today that needs our most careful attention.

There are many other phases, among which is that of publicity, or rather educational propaganda, by which the needs of the care of the teeth of children should be carried to the parents and the school authorities. This active program should be carried out somewhat as the medical men have carried out their program for the education of the people in the prevention of tuberculosis and cancer.

All of us believe in preventive dentistry, but simply believing in it will not bring it to pass. It requires organized effort to bring this about. I would therefore call the attention of this body, organized and founded as it is on the principles of preventive dentistry, to the advisability of taking concerted action toward the solution of the problems of dental hygiene for the children in the public schools. This involves the very careful study of these problems and the creation of ways and means by which the situation may be met. It involves also the personal and collective effort to bring the needs for such service to the attention of the people.

REMARKS BY OTTO U. KING, D.D.S.

At the dinner of the American Academy of Periodontology, Cincinnati, December 4, 1922.

I have just returned from Cuba, and saw in Havana what was to me a most interesting and astonishing sight, ten thousand school children in an oral hygiene drill. They were all well dressed, they had beautiful hair and the finest teeth I have ever seen. I take off my hat to those Cuban people. They are doing a big work in preventive medicine. They are up-to-date in their dental work, and at the meeting I attended they put on a fine program on pyorrhea. If you think that Cuba is a place where everyone drinks booze, you are wrong, because the only persons I saw drunk were from the States.

Some of us are inclined to think that we have done a great work in our classification of literature, but in Cuba I had a most delightful time with Dr. Andres Weber, who has done the greatest work in the

classification of dental literature that I have ever heard of, and I believe the greatest in the world. He has made a complete classification of all dental literature in twenty languages. He can give one a complete summary of what has been done on any subject since dental literature began. It was worth going all the way to Cuba to meet that man and see his library.

I want to hold these things up as a sort of mirror in which you can see yourself, on the one side as you are and on the other side as you might be. If this organization is to justify itself, it must map out a great program and then the members must work at that program. Unless you older men undertake something like this and work hard, the young men who are being turned out now will overtake you in the race for success. The young men of today are better trained than you were in the fundamentals of good dentistry.

Hard work is an important part of the price of achievement. Dr. G. V. Black told me that he was able to accomplish what he did, because from the beginning of his practice, he went to his office an hour before the time for the first patient, each morning, and locked his door and worked at some definite problem. Soon one hour became insufficient and he worked earlier and later. Dr. Brophy told me that when he was preparing his book on Dental Surgery he worked upon it every evening during three years, except six, so his family saw him only six evenings in that whole time.

That is what we need, a definite program and a lot of hard work to bring it to pass.

DENTAL LAWS

Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

BRITISH COLUMBIA

The Dental Laws and Amendments of British Columbia are dated 1911, 1914, 1917, 1919, 1921.

College of Dental Surgeons of British Columbia

Council: W. J. Bruce, Pres., Vancouver; W. J. Lea, Registrar-Treasurer, Vancouver; R. E. McKeon, Victoria; Wm. Russell, Victoria; W. J. Hacking, New Westminster; A. E. Wark, Vancouver; E. G. Smyth, Nelson; E. H. Crawford, Kamloops.

In order to become eligible as a dental practitioner in British Columbia, it is necessary to qualify as a member of the College of Dental Surgeons of British Columbia, by passing a prescribed written and practical examination.

The subjects for the written examination are: Chemistry, Metallurgy, Histology, Physiology, Hygiene, Anatomy, Bacteriology, Pathology, Materia Medica and Therapeutics, Anesthesia, Oral Surgery, Operative Dentistry, Prosthetic Dentistry, Crown and Bridge Work, Orthodontia.

The practical examination consists of any or all of the following operations in the mouth: Full denture, vulcanite or metal; Crown, gold or porcelain; Gold filling, Amalgam filling, Silicate filling, Gold inlay, Porcelain inlay, Bridge.

A percentage of 60 in written and 70 practical, is required for a pass. Examinations must be concluded within ten days from the commencement thereof, and applicants will be required to furnish all necessary patients, instruments and materials.

Applicants for examination must furnish a certificate of graduation from a recognized Canadian College of Dentistry, or from a recognized and duly authorized College of Dentistry in Great Britain and Ireland, the British Dominions or the United States. Graduates from colleges in the United States must, in addition, furnish proof of an educational standing equivalent to matriculation in the Faculty of Arts at a Canadian University.

Examinations are held in Vancouver, and commence on the third Monday in June and November in each year. Applicants are required to notify the Registrar-Treasurer at least 10 days prior to the examination; credentials and the examination fee of $50.00 to accompany application.

Registration if successful, $10.00.

W. J. LEA (per M. C.),
Verified October 23rd, 1922. *Registrar-Treasurer.*

BRITISH GUIANA

Georgetown, British Guiana.

"An American diploma from a reputable and well-known college is accepted, provided that proofs are submitted that the holder of the diploma is the one to whom it was issued.

"At present there are no openings for American dentists in this Colony; there are two American dentists here, and another (a graduate of the University of Pennsylvania) is about to open up."

BRITISH HONDURAS

Registration is required of all practitioners. Affairs are in charge of a Medical Committee. British dental credentials are naturally preferred. Information upon the subject is meagre and indefinite. The Colony of Belize or British Honduras is under English control, the neighboring states having ceded it reluctantly in deference to its occupancy and development by Great Britain. Therefore, in the absence of more definite information, it is to be *presumed* that the British Colonial Dental Laws are enforced (such as the West Indies, Bahama—see page 273 DENTAL DIGEST, May, 1919, for Dental Ordinances; Bermuda—page 276 of the same issue; Jamaica—page 220, April, 1919, DENTAL DIGEST.) The inference is also plausible that English influence is desirable in obtaining a license, and that an English dentist will be acceptable. If an American dentist is a graduate of a recognized American Dental College, and is licensed to practise dentistry in the State in which the college is located; if he can verify, authenticate, and have the vise of the Secretary of State at Washington, D. C., and the official endorsement of the British Honduras Consul, I know of no reason why he should not be registered. Address the Secretary of the Medical Board, Belize, British Honduras, Central America, for further details. See page 106, DENTAL DIGEST for February, 1920, International Dental Credentials, Central America, Honduras.

Caution—If an alien dentist locates in one of these Central American countries, or even in a British Colony, and is successful in acquiring a lucrative practice, the native dentists combine to oust him

upon some technicality, subterfuge, or pretext. So the alien dentist should know what may befall him if he locates in one of these countries without some extraordinary influence to back him.

BRITISH NORTH BORNEO

"There are no laws restricting the practice of dentistry, and no license is required."

BURMA

This is a part of India. Consequently Burma is a British Colony. The Earl of Reading is the Governor-General.

There is no dental law. The dentist is required to take out a municipal license and pay the local taxes. Rangoon and Mandalay are the chief cities. The resources, particularly mineral (ruby chiefly), of Burma are valuable. The people are Buddhists, fun-loving intelligent Hindus. Buddhism is the principal religion. Hindus of the upper class are cultured. There is reported to be openings for dentists in the larger cities of India. There are one hundred and forty languages or dialects spoken in India. Sanskrit is the ancient language.

The population of Burma alone is over 12,000,000. The High Caste and European population patronize the professions most liberally. The great majority of the people are very poor. A knowledge of the customs, religion, habits and languages of Burma should be numbered amongst the qualifications of any foreign dentist contemplating the practice of dentistry in Burma.

(All States, Nations, etc., to be printed alphabetically.)

DENTAL ECONOMICS

Standing Approved

By a Dentist's Wife

Every dentist should study to show himself approved in the community in which he lives. The size of his practice often depends more upon the impression he makes among people than his workmanship. Especially is this true of the man in the smaller cities and towns. He is in the limelight often more than he realizes, and it behooves him if he is going to be a success to beware of certain pitfalls.

One pitfall to be avoided is, the playing the social game to the point of belonging only to exclusive cliques and factions. Every town has them to a certain extent and they can suck up a man's personality without his having any inkling of the fact that it is being done.

It is ludicrous in a way for a professional man to think that being a social light is going to gain him a big practice. Take any city or village and figure out the percent of the people who belong to the social elite. In my own town it is, we will say, about one per cent, and that one per cent never has gone to just one man, never has and never will.

Many years ago a very promising young physician confided to my husband that he and his wife associated with another couple not because they enjoyed their company but for the social benefits they could gain through them. Their desire was to belong to that one per cent. They did arrive socially, and the man's wife became so imbued with the social inequality of the other ninety-nine per cent that it was seemingly painful to even speak of it. What have been the consequences of this foolishness? The man and his wife have been the butt of jokes and ridicule for years. He is an able man but his practice has suffered because of the stand he took in the community. Just recently a man of wealth and experience called him a dumbbell. I always try to defend my sex but will say that his wife has been a lot to blame. But he was woefully weak or he would not have been so easily influenced.

I will relate another case that shows shortsightedness. A dentist not so very long ago located in a small city. His wife had the social bee in her bonnet. She made the remark that she wanted none but the social elite to call upon her. It flew about like wildfire and in its flight gathered up enough talk to make a goodly yarn about the woman's

social aspirations. Needless to say none of this tended to help her husband's standing in the community.

Another dentist's wife with this same bee does this: If she is asked to a social function or to serve on a committee, she wants to know before accepting who is going to the social gathering and the names of the other members of the committee. This woman believes that show is essential to success for her husband. And that leads to a most important topic. A dentist should not owe bills around town. Debts hurt him professionally, for people talk and speculate about them. They say, "I guess his business is poor," or "If he is making so much why does he not pay his bills?"

I have known several dentists who let their bills run for months and sometimes for years. I have in mind one dentist who owed a big candy bill at a certain store. The confectioner's wife is a woman who tells everything. She told about the candy bill and the story seemed to start an avalanche of talk. The man owed bills all over town it was learned and seemed to make no effort to pay them; instead he was trying to run more if truth was given to what was said. Good credit is good advertising. My husband and I have kept ours good by going without what we could not pay for.

Nothing hurts a dentist much worse in a community than to be slovenly in his appearance. A certain professional man belongs to nearly all the clubs and lodges of his town. He aims to make a good fellow of himself and bends all his energies to that point for the sake of his practice. He knows everybody and they know him and they know that he wears soiled linens and spotted clothes. I was once his bridge partner and could not believe my eyes—a bright young man positively dirty. Others had seen the same as I for they spoke to me about him, voicing their aversion of him. Not long ago he told my husband that business was far from what it should be and if it didn't pick up he was going into something different.

Another professional man appeared at the door of his waiting room attired in an apron spotted with blood. A little old lady upon beholding him said, "You look like a butcher." The man did not hide and grieve in shame. He laughed it off as a joke. And the remark was repeated much to his detriment.

A dentist told me recently that he was going to be dumb. He was peeved of course, but he had also learned a lesson, and that was to keep to himself what he thought about another man's politics, especially so when the man happened to be a patient of his. One innocent, thoughtless remark had been sent broadcast and when he received it back it had grown into a rather long-winded speech.

Another dentist has always hated intoxicants, but it has been a joke with him and he has liked to tell how he did like them. One

day he and his wife stopped at a farmhouse. At once the farmer's wife began to sympathize with her by telling her how sorry she was for her or any woman that was tied to a drunkard. An explanation was demanded, and the woman explained how they had just learned from others how the doctor drank.

One of my friends is the wife of a physician and they are both public spirited and give much time to community and church affairs. She was attending an Aid Society one day when a little woman said to her: "We were just saying that we know the least about you folks of anybody here in town."

"How is that?" asked my friend.

"Why we just don't know anything about you. Now we know that Dr. F. and his wife fight a lot, and that Dr. C. and his wife have a hard time getting along, and that Dr. J. stays out nights, but not a thing about you folks. The doctor is such a popular man it seems too bad we don't know him better."

A friend had practiced dentistry for years in a small town. He felt his field was too small and moved to a large city. His big practice has been a surprise to everybody. I said to him last summer, "I want you to tell me all about it—just how it grew and grew."

"Because I have always been such a friendly chap, I suppose," he answered. "Back in that little town I was neighborly and friendly and tried never to hold any grudges."

"When I got ready to leave people told me they would help me all they could in the city. I never could begin to tell how much they have helped me. They wrote letters to friends and relatives in the city speaking a good word for me, they have told people about me when they came to the city, and have visited me to wish me well. Gee, it makes you think life worth while to have a lot of friends like that."

I wonder how many dentists realize just what a little bit of friendliness sometimes means to a patient. Take for instance the woman who is tied at home day after day with her family and finds it hard to get away long enough to keep her appointment. A little interest shown in her life is to her what a drink is to a thirsty person.

Just the other day a little retiring sort of a woman came to my husband from a small town. "You are friendly," she said to him in surprise, then added, "Most doctors and dentists aren't a bit that way."

He tells me he has a number of people from that town, people who come to him year after year often bringing others with them. I believe his manner helps to hold them as well as his work.

A woman said to me a couple of years ago: "People just love that old doctor of yours. Guess it is because he is never bleating away all the time about himself, but is interested in people. Likes to know

what they are doing and how they are getting along. He is glad when things go right and sorry when things go wrong."

I had this experience in California: I went to a classmate of my husband's to have some work done. He would accept no pay so I sent him some patients. The first one was a man who is head of a world famous product. He wanted a tooth extracted. Through my recommendation he went to this same dentist who told him in a very uncordial manner that he did no extracting. The man resented that manner and spoke feelingly about poor business policy. Then a friend lost an inlay and I went to the dentist with her. He was not busy just then and cemented in the inlay. When through he instructed her to be sure and make an appointment before she came next time.

"There will be no next time if I know it," she said to me. "I suppose I should have called up and made an appointment. But it was not what he said, but the way he said it that riled me."

A very successful dentist told me a few months ago that he was a great student of psychology. "Helps me to know and understand people," he said tersely.

A friend and schoolmate of mine was a very brilliant young man and most human as well. He became a physician. He located in a small town in a farming district. What did he do? He discovered that a large number of people especially the women talked a foreign language. He learned that language so he could converse with them. He learned the story of their lives, what they were and what they wanted to be. He organized a study club and everybody was free to join who cared to do so. He literally opened up a new world for those people.

One day a cavalcade of vehicles stopped at the doctor's home. The community had assembled to do him honor. The people came laden with food for a big dinner which was served under the trees in the yard. A program was given and then a purse of money was presented to the doctor. In every way the people tried to show how much they cared for him. Opportunity for bigger work came to him, he chose it and then died, they say, from overwork. And never was there a sadder funeral they tell me.

Show and bluff will never accomplish what sincerity and kindliness will do. You just can't fool people all the time. Very often it is the dentist who fools himself when he depends upon his ego to put him across.

Familiarity is not friendliness. I had once the experience of going to a dentist who asked me a lot of personal questions. I resented it and grew sarcastic but he was evidently too obtuse to comprehend my annoyance. He was a good dentist and very conscientious but he lacked understanding.

Just the other day a woman said to me: "Mrs. So and So is the most independent woman I ever saw. She cares for nobody." I returned that I did not think she was independent, only selfish.

"Well, whatever it is she is proud of it," returned the woman.

The woman referred to is a doctor's wife, and I can't help but think she is missing a lot in life. No one can afford not to care for other people. I think the higher we stand approved the more we get out of life.

Brother Bill's Letters

My dear Nephew:

Your letter shows that you have been studying cost accounting to some purpose, though I believe I see in it the influence of Miss Manager's experience in businesses where a number of people are employed and costs are carefully recorded. You ask questions as follows:

How can I determine the cost of each person in the office per income hour?

Can a big practice, with a number of people, render a given kind and quality of service cheaper than a small practice with only the dentist and a lady who is both chair-nurse and secretary, if the dentist's remuneration and the lady assistant's wages are the same in both cases?

What relation should there be between cost and fees?

Are graduate dentist associates usually profitable or satisfactory?

What about depreciation in inventory?

How can I get back the money I have invested in the office?

To answer the first two questions, let me explain something about overhead expense, and then outline the costs per person per hour in a large practice employing a number of people, but not including a graduate dentist associate.

All expenditures for office conduct may be listed under three headings: Direct payments for labor, payments for material, and overhead expense. Overhead expense catches all that the first two do not.

Suppose that in this practice the total expenditure for overhead expense and materials, other than precious metals and teeth, is $3,000 annually.

Suppose also that the secretary, who in this practice is office manager and does not assist at the chair, receives a salary of $2,000 per year. The accounting will be simplified if her salary is carried as an item of overhead expense because she will not have a chance to produce direct earnings, as the laboratory man and hygienist will, and her expense must be divided among all the direct earners in the practice. The inclusion of her salary makes a total of $5,000 annually for the overhead expense account.

Assume that the direct earners in the office and their income hours are as follows:

TABLE 1

Person	Income Hours	Annual Salary	Income Hour Salary
Dentist	1,000	$5,000	$5.00
Chair nurse	1,000	1,500	1.50
Hygienist	1,500	2,250	1.50
Laboratory man	1,500	2,000	1.33
Secretary		Salary in overhead expense account.	
Total income hours	5,000		

Numerous plans have been devised for distributing overhead expense among different workers and for different portions of the office, reception room, operating room, laboratory, etc. These merely lead to confusion. It is much better to follow the plan of the old lady who wanted to divide four apples among five boys. She made apple sauce.

To divide four apples among five boys—make apple sauce.

The most modern forms of accounting divide overhead expense equally among all workers, whatever their position or function. Where, as in a dental office, the total of income hours is important, the total expense is divided by the total of income hours. The result is the cost per worker per income hour. This amount, added to the remuneration per income hour, gives the cost of that employee per income hour.

The cost of any production is obtained by adding the hours applied by different workers, at the individual total costs.

If the overhead expense which is increased to $5,000 annually by the addition of the secretary's salary be divided by the total of 5,000 income hours, it will be seen that each worker in this office must earn not only his own salary per income hour, but $1.00 per income hour to defray the overhead expense, including the secretary's remuneration, because the overhead is apportioned equally over all the income hours of all income earners.

This makes the total income hour cost of each person in the office as follows:

TABLE 2

Person	Hourly Salary	Overhead Per Hour	Total Per Hour
Dentist	$5.00	$1.00	$6.00
Chair nurse	1.50	1.00	2.50
Hygienist	1.50	1.00	2.50
Laboratory man	1.33	1.00	2.33

The cost of any form of service from a consultation to full dentures can be determined by the amount of time each worker puts on that item, plus any precious metals or teeth.

The money economies effected by improving the office administration, to increase the number of income hours within 2,000 office hours, show very quickly in such an organization. Suppose the dentist were not to reduce his own remuneration per hour but were to sell 1,500 income hours of his own time. This would result in an increase of $2,500 in his remuneration. His additional hours would undoubtedly increase the income time of the hygienist and laboratory man and add a little to materials expense, say, $500 for the year. Note the effect on the cost of service.

TABLE 3

Person	Income Hours Per Year	Salary Per Income Hour	Overhead Per Income Hour	Total Cost Per Income Hour
Dentist	1,500	$5.00	$ .82	$5.82
Chair nurse	1,500	1.00	.82	1.82
Hygienist	1,750	1.30	.82	2.12
Laboratory man	2,000	1.00	.82	1.82
Secretary			Salary in overhead expense.	
Total income hours	6,750			

Overhead expense, $.82 per person per income hour.

When the dentist works 1,500 income hours, the chair nurse costs the office $.68 per hour less than on the 1,000 income hour basis, the

hygienist $.38 less, and the laboratory man $.51 per hour less. This answers the first part of your question as to whether a large organization can render a given kind and quality of service for less than the small organization.

An organization like this can serve for lower fees because much of the work which the dentist would otherwise have to do at a cost of at least $7.64 for himself and the chair nurse can be done by the hygienist at a cost of $2.12 per income hour. In the same way, if the dentist can sell enough service to keep the laboratory man busy 2,000 hours,

The fee must equal the cost and a reasonable remuneration in order that the practice be self-supporting.

the cost of all forms of service which the laboratory man can render but which the dentist would do otherwise himself can be lowered, because the dentist costs the practice $5.82 per hour while the laboratory man costs only $1.82. In cases where no laboratory man is employed, very considerable money economies can be effected by sending work to laboratories.

If you can develop the ability to keep an organization like this efficient, you can serve at moderate fees, establish yourself solidly in your community and earn plenty of money. Such practices as this, in the hands of different dentists, in different communities, are producing from $10,000 to $30,000 net, annually.

For example, suppose that John Smith requires service. The secretary sees him, makes the appointment, introduces him to the hygienist

who gives him an hour, to the dentist and the chair nurse each of whom gives him an hour, and they order for him one hour's work by the laboratory man. The secretary collects the fee and dismisses him. He has had over four hours' service, one hour from each of four people plus the secretary's service. On the 1,000 hour basis, that would cost the office $13.33. On the 1,500 hour basis, it costs the office $10.78. If the dentist and chair nurse did it all, on the 1,000 income hour basis, it would cost the practice over $26.00.

Your question as to the relation between costs and fees has been well answered by Dr. Stanton. He has applied to dentistry the practice by great law and engineering and accounting firms of multiplying their costs by a certain number to get the fee. The famous firms multiply their costs by four, the less famous multiply by three and the not famous by two. He has adopted that plan in selling the service of his own extensive organization, with satisfaction to his patients and himself. He tells orthodontia patients that he can not set a fixed fee but that he will show his cost sheets, if desired, and multiply the cost by the figure he gives them. He has won many expressions of appreciation from business men by that course.

The young dentist might sell the service of his organization at one and a half to two times cost, the cost including all remunerations as in Table 2 or 3. The better known dentist could sell at cost times two or three, and the famous dentist at cost times three or four. Such a plan would require adequate preparation of the dentist and his accounting system and some education of his patients, but might prove extremely satisfactory to all concerned.

In reply to your fourth question, I can say only that observation seems to indicate that graduate dentist associates are satisfactory only in a very small percentage of cases. When they are satisfactory, they reduce the overhead expense of all persons in the office by the inclusion of one more person to carry the load. Thus, in Table 2, the addition of 1,500 income hours for a dentist associate would bring the overhead charge for each worker down to $.76 per hour if he increased the materials expense $500 per year, but no extra rent had to be paid.

There is no way of telling in advance whether a dentist associate will prove profitable, because so much depends on what he does. You can tell only after it is done and the record is made.

What shall you do about depreciation? Take a good heart stimulant and then inventory your office at what a dental salesman will give for it as it stands. The sum he will name will probably be a good deal of a shock to you, but any other course is merely self-deception. Don't imagine you are going to leave your family an office worth $2,500 if the salesman will give you only $250 for it.

From my memory of your office, the inventory at the prices a

A Real "Dual Personality"

You as Employer have invested money in a concern known as "John Jones, Dentist." You must meet all charges against the practice, pay salaries to all employees and make a profit. Otherwise the business is unsound. You as Employee, of "John Jones, Dentist," are entitled to a living wage, and for that wage you should earn the sum of your living wage and something over or your employment is unprofitable.

salesman will give will show a big loss from the sums you spent upon it, and your natural question will be how you are going to get that money back. You aren't! It's lost, and it will stay lost. It may be worth to you all it cost as an example of the fact that closing your eyes to economic laws will not prevent their operation. You probably invested something like $2,000, from time to time, in equipment and I wouldn't give you $200 for it. The college professors who might have taught you a little economics between lessons about the torcular herophili and the interstitial tissue of the kidney never included in their estimate of the cost of conducting practice this loss of about $1,800. They didn't know about it themselves. Yet it is serious to you. You've earned annually no more than your day-to-day costs and a living, so you've never gotten any of this back and never will.

You can protect yourself against continuous payments from your own income in the future for upkeep if you care to do so. When you refit your office, make an annual charge against the practice of 10 per cent of the cost of equipment and enter it as overhead expense. Take the money out of the general account and establish with it a separate fund from which to pay for repairs and replacements of equipment. If a surplus accumulates in that fund, it can be held until the more expensive articles, such as chairs, engines, etc., have to be replaced. An accountant knows such a fund as a Reserve for Depreciation, because it offsets the amount by which the inventory is usually reduced each year.

How can you protect your family in case you die while a considerable portion of your capital is invested in the office? Or, how will you get back the money you spent as special dental education? You will not get the money back in either case unless you provide now for its recovery. Suppose that you have invested $4,000 in special dental education and equipment. If you will make an annual charge against the practice of 5 per cent of that sum, $200, under the heading "Reserve for Refunding," and will take 1/12 of it, or $17, out of the practice monthly and invest it in life insurance, you will have back something more than your investment when you are too old to work. At the age of forty, $200 per year will pay the premium on a twenty-payment twenty-five year endowment policy for about $4,500. In case of death, the family will receive $4,500 immediately, and whatever the office will sell for. This should be in addition to whatever life insurance you carry as protection.

The money for these two charges is to be taken out of the gross earnings of the practice before the remuneration is taken. They may reduce the amount available for remuneration, which is merely evidence that you are not worth as much to the practice as you have been

drawing, because in order to get it you had to omit charges which every manager of a successful corporation is compelled to make.

And this brings out clearly an attitude to which I have referred, the difference between John Jones, D.D.S., who is "the whole thing," and John Jones, D.D.S., serving as an employee of the business of Dr. John Jones, Dentist. As "the whole thing" he is apt to exhibit more or less disregard of business procedure and, as a friend of mine says, "earn into one pocket and spend from another." This may answer when there is plenty of money in transit, but it is apt to insure an unhappy ending when the earnings cease or lessen. The very mental process by which he sees himself as the employee of the practice is indicative of a desire to follow the best of business procedure, to establish reserves against losses, to accept remuneration which will not impoverish the practice, to institute proper accounting, etc. Such procedure puts him in position to welcome declining occupation as years advance, because his business habits will have extended to his private income and insured him against old age.

It takes considerable firmness of character to follow the suggestions made here, because one always feels that one needs the money for something else today, while the other loss or need is distant. The plan fails if one keeps the money for the reserves in one's pocket, or in the checking account of the practice or in one's private checking account, because it is almost sure to be spent for incidentals. One advantage of the insurance policy is that it enforces an obligation.

Ignorance of the law excuses no one. This applies to economic law as well as to civil and criminal law. Our profession presents thousands of illustrations of men who have shut their eyes to economic laws, in the belief that they were above such laws, or that if they ignored the laws hard enough, they wouldn't work in their case.

The law has worked while they slept. They're sticking to their chairs with their declining strength, with eyes no longer keen and hands no longer steady. They're awake now and fighting for life, because most of the means of life got away while they slept.

You may close your eyes to economic laws if you like. It doesn't affect the laws; it merely shuts you out of the picture.

Bill

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.

NOTE—Mention of proprietary articles by name in the text pages of the DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the DENTAL DIGEST, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

Editor Practical Hints:

I have taken two X-Ray pictures of the teeth of a boy who is 15 years old, and has never shed any baby teeth but the four incisors above and below. This leaves twelve temporary teeth yet in the mouth. Would you advise extracting these baby teeth in order to make room for the permanent ones? Do you think that they would come into place if they were taken out of the way? The patient is a little under size, but healthy, apparently; the baby teeth are all sound and pretty firm in the jaw. I would appreciate a reply to this. C. M. W.

ANSWER.—Where X-Rays show, as these do, that permanent teeth appear normal and in position to erupt, I think at this age the temporary teeth should be extracted, after which the permanent ones usually erupt very promptly and satisfactorily.—V. C. SMEDLEY.

Editor Practical Hints:

In answer to a question in your DIGEST department about a good investment compound for bridge work, will say: Use the shavings of one-fourth inch of the lead from an indelible lead pencil in one pint flexible collodion, to form a distinctive color; dip lower part of flask containing cast into collodion, remove and allow to drain and dry for two or three minutes; dip the second time and when dry close flask and vulcanize.

Use in the same way for plaster impression before pouring cast, and you will have an ideal separating medium; if you dip the impression before pouring cast, and the cast just before vulcanizing, the error, if any, will be exactly equalized, and will be less than tinfoil.

Be sure and dip, and do not try to paint, as dipping will give a more even layer of collodion. B. N. H.

Editor Practical Hints:

I noticed in a recent issue of DENTAL DIGEST a reader wants to know a good investment compound.

By accident I discovered an investment I have used for years, and would not change under any consideration.

Wood ashes (hickory best, oak next, pine poor); sift through fine sieve. Impression plaster, equal parts by weight or measure; mix thoroughly. Use warm water, not hot, as an investment.

Advantages: As soon as investment is complete, put water on to heat to boil out wax. While the water is sufficiently hot the case is ready; melt out wax and put on fire full heat; as soon as case is hot enough to lose its dark color (becomes white or gray) go ahead and solder. No danger of breaking facings. Do not use coal ashes as it makes a glaze on facings.

I have told quite a number of friends of my discovery, and all I have told are very enthusiastic over it. It is worth a trial by any one.

No danger of breaking a facing if investment is hard enough to trim. A two to ten-tooth bridge can be soldered up in 30 minutes if water is sufficiently warm and not an unnecessarily large investment. I have never been able to do this with any other investment, and have never broken a facing in such investment. If proportioned right and mixed right, will not crack to any depth no matter how high a heat; consequently a smaller investment can be used. L. S. F.

Editor Practical Hints:

Some time ago I saw a formula published for a mixture containing iodin, myrrh, ipecac in an alcohol-glycerin menstruum; think it also contained aconite.

Will you kindly furnish me with a formula of this nature, one that we can use in observing mouth hygiene among our patients in a sanatorium.

If myrrh cannot be used in the mixture, how about one containing iodin and ipecac, or even zinc sulfocarb added?

Thank you in advance for any information you may be able to furnish. C. R. T.

ANSWER.—While I have never seen the formula for a mouth-wash of which you speak, I can tell you something of the thought in connection with the different preparations which you mention as making up the wash.

In the first place iodine, as you know, is probably introduced purely for its germicidal action, tincture of myrrh for its astringent action, and ipecac for its supposed destruction of the amoeba. Aconite probably would not add anything to this mixture. Amoeba buccalic are

more or less generally present in the mouth and are probably inocuous, although they were held at one time as the cause of pyorrhea. You know that anything that is strong enough to be very valuable as a germicide would destroy live tissue, and that astringents act only for a limited length of time; so therefore the drugs of which you speak as constituting this mouth-wash would be of no permanent value used as such.

Mouth hygiene is best maintained by the vigorous and intelligent use of the tooth brush. Floating particles of food can be as well washed away with plain water or normal salt solution as with a mouth-wash, and the patients will not then be deluded by thinking that there has been any curative action through the medium of a mouth-wash.

I am sorry that I cannot furnish you with the formula which you desire, but really believe that your patients would be better served by not using any mouth-wash stronger than the above mentioned normal salt solution.—V. C. SMEDLEY.

Editor Practical Hints:

Would you kindly send me the following information: 1. A formula for inlay wax. 2. How may pink wax be colored.

C. L. H.

ANSWER.—(1). Yellow beeswax, 10 parts. Carnauba wax, 30 parts. Hard paraffin, 50 parts. (Parts mean quantities by weight.)

(2). With red "Cerasine" aniline dye.—V. C. SMEDLEY.

Editor Practical Hints:

Can someone kindly give information on case, as follows: Patient of about 30 years of age, suffering from pyorrhea. Very little pus, but dark, bleeding and spongy gums, and some teeth quite sore.

Lips somewhat swollen—exudation from glands of lips (something like liquid coming from a blister), and lips rough and sometimes ulcerated surface, sometimes dry mucous membrane. Can't understand the reason for this exudation, unless it is associated with pyorrhea. Seems hard to get good results on the lips. What is best treatment?

R. E. H.

ANSWER.—I will be glad to publish your question, and someone else may have more specific knowledge of such a case. My opinion is that no medicament or proprietary preparation is of any merit or lasting benefit, and that the best treatment would be a thorough scaling and polishing of the surfaces of the teeth, especially those beneath the free gum margins and a regulation of the diet which would include a generous proportion of fresh vegetables (preferably raw), fruit, whole wheat bread and cereals and milk.—V. C. SMEDLEY.

DENTAL SECRETARIES and ASSISTANTS

Secretaries' Questionnaire

All Questions to be addressed to Miss Elsie Pierce, care of
DENTAL DIGEST, 220 West 42d Street, New York City

Would you kindly inform me if you know of a school that gives a course in Oral Hygiene, where a high school training is not required?

Most colleges require high school graduation, or the equivalent. The Eastman Dental Dispensary, Rochester, N. Y., requires only one year of high school, or the equivalent. Your experience in a dental office would be of value, but without the foundation work in Chemistry, Biology, Physics, etc., it would be difficult to keep up with the course.

When the dentist has more than one operating room, would it be proper for him to dismiss the patient from the operating room, directing him to go to the secretary's desk? Also would it be proper for the patient to take his own entry-card from operating room to secretary's desk?

In clinics, patients are given their record charts and are asked to leave them with the secretary at desk, but in a private practice, it would not be advisable. Can't you install a buzzer system, so that the Doctor can ring for you when he is almost finished? You could then get the second patient ready in the other operating room, if you have no chair assistant, and be free to attend and dismiss the first patient when he is finished.

Is there any college offering a course to a dental assistant?

The Northwestern University of Chicago, Ill., has a Dental Assistants' School, giving a one year course to qualify young women in the duties of a dental office assistant. Two years of high school, or the equivalent, is the requirement for matriculation.

The Doctor prescribes lime water as a mouth wash. How shall I instruct the patients to make it?

Purchase coarse unslaked lime, cream white in color. Break up into coarse powder and put a half cupful into a quart bottle. Nearly

fill with cold water. Shake vigorously and set aside to settle for a few hours. Then pour off as much of the water as possible. Fill again with cold water. Shake thoroughly. After it has settled again it is ready for use. A smaller bottle may be filled with the clear water and found more convenient to use. The quart bottle may be filled repeatedly as the half cupful of lime should make about five quarts of lime water.

What can I use to remove stains, rust, etc., from instruments?

A very good article to use is a bar of White Diamond. Put a brush wheel on laboratory lathe, apply white diamond to wheel, and a few seconds' polishing will restore original brilliancy.

A patient asked me the cause of her child's irregular teeth. What are some of the causes?

Lack of proper use. The premature loss of deciduous teeth. Harmful childhood habits, such as thumb sucking, etc. Extraction of permanent teeth.

What will remove silver nitrate stains from the hands?

Dissolve ammonium chloride in water to a strong solution, and apply.

A reader writes that the question published in the December issue was not answered fully enough, and we are repeating the question and answer:

What is Gingivitis?

Gingivitis is divided into two classes, namely, Marginal Gingivitis and Interstitial Gingivitis.

Marginal Gingivitis is for clinical purposes assumed to be a slight inflammatory condition, apparently confined to the border of the *gums at the necks of the teeth.*

Interstitial Gingivitis includes not only the gum borders but the interstitial tissue as well, and involves all the alveolar structures, including the pericementum, connective tissue, gums and bone.

Please give me a formula for disclosing solution?

DISCLOSING STAIN

Iodine Crystals	gr. 50
Zinc Iodide	gr. 15
Potassium Iodide	gr. 15
Glycerine	dr. 4
Water q. s.	oz. 1

Would appreciate your printing a schedule showing the time of eruption of teeth.

DECIDUOUS

Central Incisors	6 to 8 months
Lateral Incisors	8 to 10 "
First Molars	10 to 16 "
Cuspids	16 to 20 "
Second Molars	20 to 30 "

PERMANENT

First Molars	6 to 7 years
Central Incisors	7 to 8 "
Lateral Incisors	8 to 9 "
First Bicuspids	9 to 10 "
Second Bicuspids	10 to 11 "
Cuspids	11 to 12 "
Second Molars	12 years
Third Molars	18 "

The bottle of cavity lining has become thick. What should I add to it?

A solvent is on the market that should be added to the cavity lining. The lining will not evaporate so easily if the cotton is dipped on the inverted cork, instead of in the bottle and excess wiped on neck of bottle.

The Doctor often asks me to have an X-ray picture developed and dried immediately and we haven't the facilities of an X-ray laboratory. How shall I dry them?

Hang near an open window, where a breeze will dry them, or within a foot of a steam radiator. We have a wire mesh screen nailed to the side of our developing room on which to hang the X-rays, and have attached a small electric fan about three feet away; that serves the purpose very nicely.

A dentist sends in the following method in use at his office for sterilizing burs, etc., which may prove of interest to readers:

All burs I use are scrubbed with soap and water with stiff brush and placed in mug containing Lysol solution, at least over night, and one of the first duties of my assistant each morning is to clean again with brush wheel on lathe, bathe in alcohol and place in bur block. Reamers, broaches and cutting instruments I place in alcohol, and later put in proper place where they will keep clean and again before using I have them placed in a jar of alcohol. All other instruments and stones I boil 15 to 20 minutes.

In the January issue of DENTAL DIGEST a correspondent requested

information about the existence of a Dental Assistants' Society in Iowa. We have received the following note on the subject:

"There is a society there, the head of which is Miss Alice M. Sampson, care of Dr. B. A. Weber, 402 Fleming Building, Des Moines, Iowa."

December Meeting

OF THE

EDUCATIONAL AND EFFICIENCY SOCIETY FOR DENTAL ASSISTANTS
FIRST DISTRICT, NEW YORK

The December meeting of the Educational and Efficiency Society for Dental Assistants, First District, N. Y., was held at the Academy of Medicine, 17 West 43rd St., N. Y. City, Tuesday, December 12, 1922, at 8 P. M., the President, Juliette A. Southard, in the chair.

Following the usual routine of business and reports of committees a very interesting program was presented as follows:

Address: "Relation of the Assistant to the Dental Office," William Dwight Tracy, D.D.S.

Address: "The New Dispensation," Elizabeth Sears, President, N. Y. League Business and Professional Women.

Dr. Tracy said in part that the proper attitude of the dental assistant toward her occupation was most essential to her success; she should display a devotion to her duties and loyalty to the interests of her employer. Among her necessary qualifications were tact, patience, courtesy, cheerfulness and sympathy. A neat and appropriate manner of dress was also most essential. He amplified this by saying that tact was the quality which enabled one to do and say the right thing at the right time; patience the attribute that enabled one to come in contact with trying situations, retaining one's composure, self-control under stress being evidence of strength of character; courtesy the valuable factor in the deportment of the assistant towards the patient and in her conversations with people verbally and on the telephone; cheerfulness calmed the distress and apprehension of patients, and the display of good spirits always had a salutary effect; a smile and friendly inquiry smoothed over many a trying situation.

Dr. Tracy emphasized that coupled with the above one must possess a fair amount of common sense, that is, one should cultivate the ability to see things as they are and appraise them at their true value. He stated that the career of dental assistant had many possibilities, that by faithful and thoughtful attention to detail she could make herself invaluable, assured of a permanent position at a good salary

and with less restricted working conditions. Health is a valuable asset and he complimented the Society on its outdoor activities of the past summer; he urged fresh air, exercise, brief outings and respite from the confining office routine as being essential to the continued activity of the dentist and his assistants.

Dr. Tracy said it would be impossible for him to enumerate in detail the many ways the assistant helps and eases the strain on the dental operator, but was sure that every dentist who has a trained assistant would admit, if frank about it, that the most trying days are those when the assistant is obliged to be away from the office. He stated he felt compelled to say something of the dentist in his relation with the office assistant, that if the assistant was expected to possess all the qualities mentioned, it was equally essential that the dentist possess them. If the dentist desires the best effort from his assistant he should treat her with respect and consideration, "he must not expect her to be a super-woman; if she were she would not be working for him, she might be a dentist herself, and quite possibly a better one than her employer—who knows?"

He said that nothing was gained by the dentist who scolded and berated his assistant before his patients; inharmony and friction is keenly noticed by patients and acts as a detriment to the practice.

Dr. Tracy closed stating the time had gone by when the dentist could develop a creditable practice without the efficient services of assistants, and he commended this field of activity as one well worth while for young women who desired positions both dignified and useful.

Mrs. Elizabeth Sears, a prominent writer and editor of a magazine for women, "The Independent Woman," which is the organ for the National Federation of Business and Profesional Women, spoke of the wonderful opportunity for women in business and professions. She mentioned that the N. Y. League of Business and Professional Women represented an earning capacity of $1,500,000 yearly, and the National organization $80,000,000. One-fifth of all the women in the world were bread winners. She emphasized that one's occupation always carried with it responsibilities, and that one should train to fill her position to the best of her ability and seek to get something out of her work besides eight hours a day.

Mrs. Sears said that when one spoke of capital one usually thought of money, but that the finest capital of all was conscientious effort to do one's best and that one got out of a job just what one put into it. She emphasized the fact that women were in the business world to stay and that it was up to them to make of themselves better business women for a better business world.

Splendid reports were given on the classes being held at the present time—Public Speaking and Parliamentary Practice and Laboratory

Technique. Arrangements are being made for a class in Roentgenology and a course on Office Regeneration, which will comprise business system, business ethics, psychology, and better dental service. These educational features are given to the members free of charge.

The meeting came to a close with a message of appreciation from the President for the splendid co-operation of the members in making the first year of the society such a successful one. She urged each one to sow carefully if they wished to reap profitably, and to work with greater effort if possible to make the ensuing year as successful. She said that *perfection* was the rarest flower that grew, but that one could always try to find it.

A dinner preceded the meeting, tendered to Mrs. Sears and the President in honor of the society's first birthday. The members of the society presented them with beautiful corsages of flowers and graced the President's desk in the meeting room with a vase of fragrant blossoms, as a tribute to the successful conduct of the society.

DIETETICS and HEALTH

Educating the Public

The following is the fourth of a series of "short stories" intended to inform the public of the possible results of dental ignorance or neglect, and to suggest the benefits which can be reasonably expected from intelligent dental treatment.

Any practitioner who wishes to have these stories published in his local newspaper is privileged to do so, but in all cases the author's name must accompany the article, and in no case must a local dentist be mentioned in any way in connection with the article. The design is to secure publicity for dentistry rather than for any individual practitioner.—EDITOR.

Is It Fair to Mary?

By L. W. Dunham, D.D.S., New York

Mary's teeth were coming in crooked. No one worried but mother—father said they'd straighten out when she got older; his had. Of course father's teeth didn't deform him exactly, but they were far from "straight" enough for a beautiful young girl, which Mary surely promised to be.

That was some years ago. Of course nothing was done, nothing is *ever* done when "fawther *knows.*"

Today, all her friends say, "Mary Bryant would certainly be a beautiful girl if it weren't for her teeth. She's sweet until she opens her mouth—and that spoils it all—it's a downright shame, and she's *so* sensitive about it."

Mary could have been a beautiful girl and had a happy girlhood if only her parents had consulted a dentist. A few months with a simple appliance, and a rare beauty would have been liberated.

Is there a little Mary in *your* home?

U. S. Adopts Standards to Define Pure Foods

For guidance of Federal officials in enforcement of the food and drugs act, Secretary Wallace of the Department of Agriculture has

adopted, effective at once, standards and definitions for bread, butter, condensed milk, cocoa products, ginger ale, cayenne pepper, and oil of cassia.

Butter must contain not less than 80 per cent of milk fat and less than 16 per cent of water and may by acts of Congress, also contain added coloring matter. Bread is limited to not more than 38 per cent moisture one hour or more after baking, and milk bread to not less than one-third of the water ingredient replaced by milk. Rye bread must have not less than one-third its flour ingredient replaced by rye, flour and raisin bread at least three ounces of sound raisins for each pound of baked product.

Condensed milk, evaporated milk and concentrated milk must contain not less than 7.8 per cent of milk fat, nor less than 25.5 per cent of total milk solids of at least 33.7 per cent.

Chocolate content is fixed at not less than 50 per cent of cocoa fat, not more than 8 per cent total ash and not more than 7 per cent of crude fiber.

Did You Ever Eat Green Bread?

The question of proper diet for human beings is at last claiming the attention of the best minds in scientific circles. A distinguished writer in a recent number of Physical Culture presents a phase of this subject in a very instructive way. He says:

"Dr. E. V. McCullom, the leading American authority on vitamines, came to the conclusion that man had made a serious mistake in developing the seeds of the plants as the chief source of his food supply, to the neglect of the leaves. He further suggested that we would, with the development of dietetic wisdom, make flour out of leaves which would be added to the grain-made flour to supplement its dietetic deficiencies.

"This sounds fantastic and looks more so, because the color of such bread is neither white, brown, nor yellow, but *green*. I can vouch for the fact that the idea is not wholly ridiculous, for I tried it out on a small scale and made some very palatable green bread, which we ate without fatal results.

"Dr. McCullom's conclusion as to the importance of leaves as compared with grains was based on experiments in feeding white rats. He found that rats could not grow to maturity on a diet of grain, but that they could do so when the grain was supplemented with edible leaves.

"This may raise the question in some minds as to why humans should go to the rat to learn dietetic wisdom. The reply is that the

rat is omnivorous and fitted by nature and experience to live on pretty much the same type of foods than man lives on. Neither the cat nor the cow would do as well for such experiments, because the one is carnivorous and the other herbivorous. The cow can live wholly on grass or other leaves, but neither humans nor rats have the digestive organ capacity to live wholly on such a bulky diet.

"A further reason for experimenting on animals in general and rats in particular is that experimenting on humans is not feasible except in a very limited way. We can try new foods and new diets that we believe to be good, but we cannot be expected to stick it out on diets that are obviously destructive to health or life. But it is by just such radical experiments upon animals that we may learn of the dangers and deficiencies of foods for human use.

"The rat completes its cycle of existence in fewer months than a man requires years. It is only by carrying out food experiments through a complete growing period, or through growth and reproduction, and sometimes through a succession of two or more generations, that the full and final effects are to be seen. Even if some group of martyrs should offer themselves on the altar of science as subjects for such exhaustive dietetic experimentation, we would all be dead and buried before such conclusive results as are attained on quick growing animals would become known.

"The chemical explanation of the why of this bears out the biological arguments. Outside of the three food elements of protein, fat and carbohydrates, we know of at least seven other food essentials. These are the three vitamines, the three minerals, phosphorus, calcium and iron, and lastly cellulose needed to secure a healthful digestive action.

"Green leaves contain all seven of these essentials which are most likely to be missing or insufficient in the conventional diet.

"Such are the arguments for, and credentials of, leaves as food, but it doesn't follow that you should live exclusively on leaves, but rather that leaves should be considered as a regular element of the diet, along with seeds and fruits, milk and eggs.

"The variety of leaves to select from is comparatively small, yet is larger than the variety of seeds, for most of us live and die without eating over a half dozen kinds of seeds, while wheat alone forms nine-tenths of the seed portion of the average American diet.

"The leaves of trees or woody perennial shrubs do not seem suitable for human food. Some of them may be edible, but tea leaves alone are used, and they are merely steeped, not eaten. Tea leaves contain tannin, which is anything but wholesome, and so do many tree leaves. The leaves of corn and other grasses eaten by herbivorous animals, are too fibrous for human consumption.

"The type of plants the leaves of which are edible for humans are the tender, quick-growing herbs or 'vegetables.' All our garden vegetables were at one time wild species, or as we would now call them, weeds. We have merely domesticated and cultivated the more edible varieties. Some weeds or wild species are still eaten under the general term of 'greens.' I would not attempt to name or classify them, or even recommend them, since such information is useless to city readers and folks that live in the country can grow greens in the garden easier than they can harvest them in the fields. Here is a complete list of garden grown leaves which I shall attempt to arrange in order of popularity and practical utility:

Lettuce	Chinese cabbage
Cabbage	Chinese mustard
Spinach	Parsley
Beet leaves	Celery leaves
Endive	Young onion tops
Mustard	Corn salad
Kale	Chicory
Turnip leaves	Sorrel
Chard	Chervil
Collards	Cress (pepper grass)
Romaine lettuce	Water cress
Dandelion	Witloof chicory
Radish tops	(Christmas salad)

Brussels sprouts

"Some of these leafy foods are to be eaten raw and some cooked. There is no law or rule in the matter except the way you like them best. Try them all uncooked and then cook the ones that don't taste right raw."

EXTRACTIONS

No Literature can have a long continuance if not diversified with humor—ADDISON

Walking is healthful exercise, but for the love ov Mike look where you're going!

(Wifey)—You raised your hat to that girl who just passed. You don't know her, do you?

(Husband)—No, but my brother does, and this is his hat.

"It's grand weather for golf we're haeing th' noo," remarked Sandy to Jock. "I'll gie ye a run on the links in th' mornin'.

"In th' mornin,' ye say?" replied Jock.

"Aye, in th' mornin'," replied Sandy.

"Ah, weel," said Jock, "I canna miss a game o' golf. I'll be there."

Then, after a long pause, he added: "But I had intended tae get married in th' mornin'."

One of our readers out in Iowa observed this interesting sign painted on the side of a building in his neighborhood and sends it to us:

RELIABLE VULCANIZING

WM. O'DONOGHUE
FUNERAL DIRECTOR

On a voyage of one of the Cunard liners from New York to Liverpool a Major H. Reynolds of London was registered on the passenger list, according to Irwin Cobb. The purser, running over the names, assigned to the same stateroom as fellow travellers this Major Reynolds and a husky stockman from the Panhandle of Texas.

A little later the cattleman, ignoring the purser, hunted up the skipper.

"Look here, cap," he demanded, "what kind of a joker is this here head clerk of yours? I can't travel in the same stateroom with that there Major Reynolds. I can't and I won't! So far as that goes, neither one of us likes the idea."

"What complaint have you?" asked the skipper. "Do you object to an army officer for a travelling companion?"

"Not generally," stated the Texan—'only this happens to be the Salvation Army. That there major's other name is Henrietta!"

The stingiest and meanest man has been discovered. The night before Christmas he told his little boy that Santa Claus was dead.

A magazine writer says the dog fills an empty place in a man's life. This is especially true of the hot dog!

(Netzikoff)—So brother Popovitch was kicked out of the Soviet by the Bolsheviks and sentenced to be hanged. I thought he was a loyal member. What did he do?

(Zorsky)—He had a tooth crowned.

Mother always had little Tommy say grace before meals, and she made no exception to the rule when she took him to luncheon with her one day at a restaurant. After the luncheon had been served she said:

"Now, Tommy, say grace, please."

"But, mamma," he objected, "we're paying for this, aren't we?"

A distinguished Senator down in Louisiana who made a visit to his home town after a long absence, was telling some friends of his a story he heard while on this visit, and if true, it may show why they need the Klux Order down there. The Senator said the folks back home told him of a man who came riding into the old town one day astride of a ferocious lion. Under each arm he had a wildcat, and in one hand he had a rattlesnake that he used for a whip.

This fellow, they say, drove up to a drug store, hitched his lion out in front and called for a soft drink.

"What'll you have?" the soda clerk asked.

"Give me a good drink of carbolic acid, colored with iodine."

The clerk gave him what he wanted, and then this fellow ordered some moth balls to take the taste out of his mouth.

By this time, the people were all wondering who this stranger was, and finally some one got up enough courage to ask him.

"I come from Morehouse Parish," the stranger replied, "but it got too wild for me over there, and now I'm on my way to the oilfields."

FUTURE EVENTS

THE MASSACHUSETTS BOARD OF DENTAL EXAMINERS will hold an examination for dentists and dental hygienists on March 6, 7, 8 and 9, 1923. All applications for examination should be filed at the office of the Secretary, 146 State House, Boston, Mass., at least ten days before date set for said examination.

J. N. CARRIERE, D.D.S., *Secretary.*

The next annual meeting of THE ALUMNI SOCIETY OF THE DEWEY SCHOOL OF ORTHODONTIA will be held on April 12th-13th, at the Edgewater Beach Hotel in Chicago. The usual high standard of the meetings of this society will be maintained. All interested in Orthodontia are cordially invited to attend these meetings.

GEORGE F. BURKE, *Secretary,*
741-43 David Whitney Bldg.,
Detroit, Mich.

THE TEXAS STATE DENTAL SOCIETY will hold its forty-third Annual Convention at Fort Worth, Texas, April 16-19, 1923.

For space, Exhibitors will please address Dr. W. H. Nugent, F. & M. Bank Bldg., Fort Worth, Texas.

J. G. FIFE, *Secretary-Treasurer,*
1813 Main St., Dallas, Tex.

THE DENTAL HYGIENISTS ASSOCIATION OF THE STATE OF NEW YORK, will hold its third annual meeting at the Hotel Commodore, New York City, on Monday and Tuesday, May 7th and 8th, 1923. As the meeting of the Dental Society of the State of New York will be held at the same hotel, May 9 to 12, it is to be hoped that dentists and dental hygienists of New York and neighboring states will attend both meetings. A cordial invitation is extended to all interested in oral hygiene to attend the clinics to be held on Tuesday afternoon, May 8th. Details of the program will be published later.

KATHERINE F. HOLLIS,
Secretary, D. H. Association,
State of New York.

Address: 437 West 59th Street, New York City.

The 55th Annual Meeting of the PENNSYLVANIA STATE DENTAL SOCIETY will be held in Philadelphia, at the Bellevue Stratford Hotel, May 15, 16, 17, 1923. All members of organized dentistry are cordially invited to attend.

A. C. BARCLAY, *Secretary,*
914-915 Highland Bldg., Pittsburgh, Pa.